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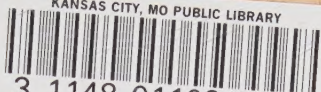
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BY
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BRITISH BIRDS

VOL. II

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PL. 61



KINGFISHER

BRITISH BIRDS

WRITTEN AND ILLUSTRATED BY
ARCHIBALD THORBURN, F.Z.S.

*WITH ONE HUNDRED AND NINETY-TWO
PLATES IN COLOUR*

IN FOUR VOLUMES
VOL. II

NEW EDITION

LONGMANS, GREEN AND CO.

39 PATERNOSTER ROW, LONDON, E.C. 4

NEW YORK, TORONTO

BOMBAY, CALCUTTA AND MADRAS

1925

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Made in Great Britain

472989

OCT 20 1925

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STARLING

CHOUGH

BRITISH BIRDS

FAMILY STURNIDÆ

THE STARLING

Sturnus vulgaris, Linnæus

PLATE 49

The Starling is widely distributed over the British Islands, and is one of our most common birds. Abroad it is found in the Faroes—where a broader-billed race than ours occurs—and from northern Scandinavia and Russia southwards to the Mediterranean countries.

The large and rather slovenly nest is placed in a hole in the trunk of a tree, wall, or cliff; in thatch, under the eaves of houses and outbuildings; sometimes in thick ivy growing on the walls of dwellings. It is composed of dead grasses, straws, roots, and moss, roughly lined with some feathers and hair. The eggs, varying in number from four to six or seven, are pale blue, without any markings.

The song, often heard during the winter months as well as at other times, is delivered as the bird sits perched on some tree or building, and consists of various chattering notes, combined with some which are really musical. The notes of other species are also imitated. As he sings the Starling has a characteristic habit of flapping his wings, at the same time expanding and separating the feathers of his crest and throat.

During the past fifty or sixty years this bird has greatly increased in numbers, and although often helping himself freely to cherries and other fruit, the damage done is more

than paid for by the destruction of countless numbers of injurious insects and larvæ.

In autumn vast hordes of Starlings find their living in the fields and pastures, and as evening deepens the flocks resort in thousands to some favourite roosting-place, such as evergreen shrubberies or reed-beds. As the various packs unite, they perform wonderful aerial evolutions for some time in perfect order before finally settling down for the night.

The female resembles the male, but the tints on the plumage are duller, and the light spots larger. For some time after leaving the nest the young are of a uniform blackish-brown colour, marked on the underparts with greyish-white.

Length, $8\frac{1}{2}$ inches ; wing, $5\frac{1}{8}$ inches.



NUTCRACKER

ROSE-COLOURED STARLING

THE ROSE-COLOURED STARLING

Pastor roseus (Linnæus)

PLATE 50

This beautiful bird, an irregular wanderer to our islands, was unknown as a British species until 1742. Since that date it has frequently been noticed as a visitant to our shores, occasionally as far north in Scotland as the Orkneys.

Its breeding headquarters are in Western Asia, although sometimes vast numbers nest in Southern Europe, and migrating eastwards, pass the winter in India. When breeding the birds associate in large colonies and at this time their movements seem to be very erratic, and a favoured locality may be only occupied for one season.

The Rose-coloured Starling, or Rose-coloured Pastor as it is sometimes called, feeds chiefly on the locust, which accounts for the uncertain movements of this species.

An interesting account of a great visitation of these birds to the castle of Villafranca in Italy during the summer of 1875, furnished by Edoardo de Betta, is given in the *Zoologist* for 1878, p. 16. Arriving at first in small numbers, they rapidly increased until it was estimated that some twelve or fourteen thousand birds had occupied the building. They at once began their nests, and as soon as the young were able to fly, disappeared as suddenly as they came.

The nest, loosely constructed of dead grasses, is sometimes placed in a cranny or recess in a wall, at others among heaps of stones on the ground, and contains five or six smooth and shining bluish-white eggs. The notes of the bird are very like those of the Starling.

The female resembles the male, though duller in colour, while the young bird is in general brownish-grey with a whitish throat and having the edges of the feathers on the wing and tail buff.

Length, $8\frac{1}{2}$ inches ; wing, 5 inches.

FAMILY CORVIDÆ

THE CHOUGH

Pyrrhocorax graculus (Linnæus)

PLATE 49

The Chough, unfortunately rapidly decreasing as a British species, still lingers on some of the sea cliffs in the south-western parts of England and Scotland, on the coasts of Wales and Ireland, and in the Isle of Man and other islands.

It also occurs in many parts of Europe, where it can find the kind of locality suited to its habits, and in Asia and Africa.

The nest, placed in some recess or fissure in rocks or among ruins, is built of sticks with a lining of wool and hair. The four or five eggs are dull white, marked with streaks and spots of ashy-grey and light brown.

The Chough is sociable in its habits, feeding chiefly on grubs, insects of various kinds, and seeds, and has a shrill and penetrating cry which it frequently utters. It is one of the most beautiful members of the Crow family, on account of its elegant form, velvety plumage shot with purple and green reflections, and scarlet bill and legs. Like the rest of its family it is easily tamed.

The plumage of the sexes is alike.

Length, 16 inches ; wing, 11 inches.

THE NUTCRACKER

Nucifraga caryocatactes (Linnæus)

PLATE 50

The earliest known occurrence of the Nutcracker in the British Islands was one obtained in Wales in October 1753, and recorded by Pennant. Since that date a good many have been noticed, mostly in England.

Abroad it breeds among the pine forests in the mountainous parts of Central and Southern Europe, and ranges eastwards across Siberia.

The Siberian form has a longer and more slender bill than the one inhabiting Europe, and as it is apparently this race which most commonly visits England, I have represented it in the plate.

Little was known of the nest and eggs of the Nutcracker until 1862, when they were obtained on the Danish island of Bornholm, lying to the south of Sweden in the Baltic; although an egg had been procured in the French Alps by the Abbé Caire as far back as 1846.

Like the Jay, this species becomes extraordinarily shy and silent during the nesting time, which begins very early in the season before the winter's snow has melted in the forests, where the nest is built on the bough of a pine, usually near the trunk of the tree at a moderate height from the ground.

The nest, composed of sticks, with a lining of grasses and moss, contains from three to five eggs, pale bluish-green in ground colour, spotted and freckled with olive-brown.

The Nutcracker feeds on the seeds of coniferous trees, nuts, berries, beetles, and other insects, whilst its slow undulating style of flight and harsh call-notes are not unlike the Jay's.

The female is indistinguishable from the male in colour.

Length, $12\frac{1}{2}$ inches; wing, $7\frac{1}{4}$ inches.

THE JAY

Garrulus glandarius (Linnæus)

PLATE 51

The Jay is a resident and locally a common bird in the woodland parts of England and Wales, though much scarcer and more confined to certain districts in Scotland and Ireland. It is also found over the greater part of Europe where the surroundings suit its habits. It is said to have been more abundant formerly in our country, before the days of game preservation; nevertheless, owing to its intelligence and wariness, it still holds its ground wherever there are large tracts of wood and coppice. In the county of Surrey it seems to have increased in numbers during the last few years.

Nests of this species which I have had under observation were placed in a Scotch fir about ten feet or more from the ground, and built in a fork where the branches join the trunk. They were composed of twigs of the birch and other trees, with a lining of finer twigs of the birch and roots.

The five or six eggs are greenish-white, minutely speckled with olive-brown. While the nest is being made, and until the young have flown, the parent birds are never heard and seldom seen, approaching it silently by roundabout ways, unless the nestlings are interfered with, when the female utters harsh screams, and at times a curious cat-like call.

The young I observed were also absolutely silent, unless handled or alarmed by anyone climbing the tree. The colour of their eyes was a bluish-grey, not brown, as has been stated. The food of the Jay consists of various nuts



JAY

MAGPIE

and berries, green peas, grubs and insects, and also the eggs and young of other birds.

Its usual call-note is harsh and strident and sometimes the notes of various other birds are imitated.

The female is a little duller in colour than the male.

The Jay of Ireland is said to be darker and more rufous in colour than our bird.

Length, about $14\frac{1}{2}$ inches ; wing, $7\frac{1}{4}$ inches.

THE MAGPIE

Pica rustica (Scopoli)

PLATE 51

This handsome bird is a resident species widely distributed over a great part of the British Islands and though common in some localities, it is scarcer where game preserving is general.

Abroad it is found over the greater part of Europe, from Northern Scandinavia to the Mediterranean.

The Magpie breeds early in the year, usually about the end of March, and builds its large domed nest of thorny sticks arranged on a groundwork of earth and clay with a lining of rootlets and grasses, in the fork of a tree or in some tall thorn hedge. The eggs vary in number from six to nine, and are generally of a pale bluish-green, speckled with umber-brown. The notes of the Magpie, softer in tone than those of the Jay, are, as Macgillivray describes them, "a sort of chuckling cry or chatter."

Always shy and watchful and never off its guard, it frequents woods, meadows and cultivated ground, especially those fields surrounded by trees and tall hedges to which it retreats on the first suspicion of danger. When feeding among wet grass the bird usually elevates its tail to keep it dry. The food consists of grubs, eggs, young birds, rats, mice, and carrion of various kinds. In thick covert, if a fox be about, its presence is often betrayed by the incessant chattering of the watchful bird.

The male and female are alike in colour, though the latter may be slightly duller, and is also smaller.

Length of male, about 18 inches ; wing, $7\frac{1}{4}$ inches.



ROOK

JACKDAW

THE JACKDAW

Corvus monedula, Linnæus

PLATE 52

The Jackdaw is a very common and well-known bird throughout the greater part of the British Islands and often to be seen in company with Rooks. It is found all over Europe as well as in Asia and Africa.

The nest is made in hollow trees, crannies and holes in the stonework of old churches, ruined castles, and other buildings ; sometimes in cliffs, or even underground in rabbit burrows. It is usually a large structure composed of sticks, snugly lined with wool and fur, and holds from four to seven eggs, greenish- or bluish-white in ground colour, marked and blotched with brownish-black and purplish-grey.

The call note is a sharper and shorter caw, or rather *cae*, than that of the Rook, and the two species may be easily distinguished when flying overhead in company, even at some height from the ground, by the smaller size and different notes of the Daw.

It lives on much the same food as its larger relation, viz. insects, worms, grubs and eggs of other birds and also grain.

The Jackdaw is a very sociable bird, seeking its food in fields and meadows, as well as by the sea in companionship with its fellows. In winter the flocks often travel long distances between their roosting-place and feeding grounds, returning punctually before dark.

The female is very like the male in colour, except that she has a less noticeable collar of grey. The young are mostly a dullish black.

Length, 14 inches ; wing, 9½ inches.

THE RAVEN

Corvus corax, Linnæus

PLATE 53

The Raven still lingers as a breeding species in some of its ancient haunts, chiefly along the southern and south-western coasts of England, nesting also in the hilly parts of Cumberland and in Wales as well as the wilder parts of Ireland.

In Scotland it is much more numerous, especially in the western islands and among the wilds of the Highland deer forests.

This wanderer over the face of the earth, including various allied forms, is found all over Europe and has a wide range in Africa, Asia, and America ; it also inhabits Greenland.

The nest, begun early in the year in February, is usually placed on some inaccessible ledge of rock, although in former days when the Raven bred in many of the wooded districts in England, it was generally built in a tall tree and often so situated that it could hardly be reached from below.

It is built of dead sticks of various sizes, with a warm lining of wool, feathers, fur or the hair of deer. The eggs, varying in number from three to six, on rare occasions seven, are bluish-green in ground colour, marked and blotched with greenish-brown and grey.

The Raven's voice is distinct and characteristic and may be recognised at a great distance, the short double note being often heard when the bird itself seems a mere speck against the sky.

The food consists of carrion of all kinds, such as sheep and lambs which have died on the hill or fallen over precipices,



dead fish cast up by the sea, and also sometimes grain, nothing coming amiss to this omnivorous bird.

In character and intelligence the Raven stands first among his kind, and according to Professor Newton is probably more highly developed than any of our birds. Endowed with wonderfully keen eyesight and a hardy constitution, he is able to find a living where most birds would starve.

The male and female are alike in colour, and pair for life.

Length, about 26 inches ; wing, 17 inches.

THE CARRION-CROW

Corvus corone, Linnæus

PLATE 54

The Carrion-Crow is resident and not uncommon in many parts of England and Wales, and although a shy and wary bird is known to inhabit the London parks. Roughly speaking, this crow is still plentiful from the Borders to the central portions of Scotland and occurs in Morayshire and along the eastern side as far as Sutherland, but it is rare or altogether absent in the northern and north-western parts, where its place is taken by the Hooded Crow. About Aberfeldy on the Tay, and in the area watered by the Clyde, where the two species meet, they often interbreed. I think this may also occur near Nairn, where I have seen a bird intermediate in colour between the two. In Ireland the Carrion-Crow is hardly known. It inhabits Western and Central Europe, an allied form being found in Eastern Asia.

Breeding later in the year than the Rook or Raven, the Carrion-Crow has its nest completed by the end of April, either building a new one or returning to its home of previous years. This is usually placed in a tree or on some ledge of rock and is built of sticks and warmly lined with moss, wool, feathers, and hair. When the nest has been occupied for several years in succession it becomes large and bulky owing to the frequent addition of materials. The eggs, varying in number from four to six, have the ground colour a pale bluish-green, spotted and blotched with umber- or olive-brown and shades of purplish-grey.

Like the rest of its family, the Carrion-Crow will eat almost any variety of food that may come to hand, and devours great numbers of eggs and young of other birds, sometimes also attacking and killing leverets and even newly-born lambs when it gets the opportunity. It keenly searches the seashore for mussels and other shell-fish, of which it is extremely fond, and in order to open these easily will rise to some height and drop its booty on a stone or rock, thus fracturing the shell.

The ordinary cry of the Carrion-Crow is a harsh grating croak, varying in tone, but not so deep as the Raven's nor so soft and pleasing as the Rook's.

In its habits the bird is more or less solitary, scouring the countryside in search of food, and is generally seen in pairs as it probably mates for life. At times, however, when food is abundant in any locality, or where their numbers are not kept down, Carrion-Crows will collect in flocks.

The sexes do not differ in plumage.

Length, about 20 inches ; wing, 13 inches.

THE HOODED CROW

Corvus cornix, Linnæus

PLATE 54

This species, also known as the Grey or Royston Crow, is a common autumn and winter visitant to England, being most numerous in the eastern counties, where it may be seen from September to April. Although its wanderings extend to many inland parts of England, it is seldom found in Wales. There is no doubt that these winter visitors to our shores come from Northern Europe.

It breeds in the Isle of Man and in Ireland, where it is plentiful. In Scotland it is also resident, being abundant all along the western coast and islands, as well as in the northern districts, while it is also not uncommon among the deer forests of the Central Highlands.

Abroad it is found over a great part of Europe, chiefly in the northern and eastern portions, ranging through Siberia to the Yenesei; and either this or a closely related race is resident in some of the Mediterranean islands, Egypt, and Palestine.

The nest, constructed of the same materials as that of the Carrion-Crow, is built in a tree or on a rocky cliff, while the colour and markings of the four or five eggs are exactly like those of the latter bird.

According to Professor Newton, the two species only differ in their colour, their habits, voice, and nidification being precisely alike, but Lord Lilford and other authorities have noted a distinct difference in their cries. There is no question, as mentioned before in the account of the Carrion-Crow, that in places where the two species overlap they



HOODED CROW

CARRION-CROW

interbreed, and hybrids in intermediate states of plumage have often been obtained.

The Hooded Crow, like its congeners, lives on eggs, young or wounded birds, carrion of all kinds, and on the deer-forests feeds largely on the offal left on the hill or in the burns after a stag has been killed. It haunts the sea-shore to obtain any dead fish left by the tide, and may often be seen there stalking about in its usual sedate manner, occasionally giving a little quick sidelong hop when any titbit attracts its notice. It has the habit, in common with the Carrion-Crow, of getting at the contents of the larger shell-fish by rising to a height and dropping them on a stone. Owing to its bad character and marauding habits it is trapped, shot and destroyed on every possible occasion by gamekeepers and others, but yet it seems to hold its own.

There is no difference in the colour of the sexes.

Like the Carrion-Crow, individuals vary a little in size, but the measurements are practically the same in both species.

Length, about 20 inches ; wing, 13 inches.

THE ROOK

Corvus frugilegus, Linnæus

PLATE 52

This bird, the best known and most abundant of the Crow family in the British Isles, is widely distributed, though less plentiful in the northern parts of Scotland, but found nesting as far north as the Orkneys, as well as on some of the Outer Hebrides and islands off the west coast of Ireland. Its breeding range extends over the greater part of Europe, from Scandinavia and Northern Russia as far south as Biarritz in France and Modena in Italy, and eastwards to the Crimea. After the nesting season a certain migratory movement takes place among our home-bred birds, some apparently crossing to the Continent; while birds in the northern portion of Europe migrate southwards as winter approaches as far as the Mediterranean countries. Many of these migrants come over to winter with us, leaving our shores again in March and April for Scandinavia.

The Rook is peculiarly regular in its habits, returning year after year early in February to its old familiar haunts, although the nests are not usually completed until the middle of March. The favourite site for a rookery is among the topmost branches of tall elms or other trees in parks, or in the neighbourhood of cultivated ground, but other situations are often chosen, even in the midst of large towns.

As the season advances the rookery becomes a noisy and busy scene, and the birds have no scruples in robbing an unguarded nest of its building material, causing in consequence much uproar and disturbance in the community. The bulky nest is composed of sticks and twigs, either dead

or gathered fresh from the trees, and lined with fine roots, straws, grass, and sometimes wool. It contains five or six eggs, in ground colour pale greenish-blue, blotched and marked with greenish-brown.

The familiar caw of the Rook is known to everyone, and while pairing and nest building is in progress the babel of various cries and murmurings is continuous and incessant, yet to those who are used to the sound and from association it is most pleasing.

The Rook is more or less omnivorous, worms, grubs, and insects of various sorts being its staple diet, while it has gained the reputation of being an inveterate egg-stealer when it gets the chance, especially in times of drought which cause a scarcity of worms and larvæ. It also causes a good deal of harm owing to its partiality for seed-corn and potatoes, but no doubt some of the damage done is compensated for by the quantity of insect pests destroyed, and it is an open question whether the Rook is beneficial to the farmer or not.

Although always, comparatively speaking, at our doors and affording many opportunities of studying its ways, the Rook has many unexplained habits and customs : sometimes a large flock will perform curious aerial evolutions, known as "weaving," the individuals crossing and recrossing each other's tracks, while circling at a great height in the air.

Young Rooks, until they are about one year old, have the base of the bill sheathed with bristly feathers, similar to those on the bills of the adult Carrion and Hooded Crows.

On reaching maturity the Rook sheds these bristles and also the feathers on the chin, which leaves a characteristic bare patch round the base of the bill. Compared with the Carrion-Crow, the Rook has a more slender bill and is more loosely feathered about the thighs.

The male and female are alike in colour.

Length, about 19 inches ; wing, $12\frac{3}{4}$ inches.

FAMILY ALAUDIDÆ

THE SKY-LARK

Alauda arvensis, Linnæus

PLATE 55

Hardly any bird is better known or so famed in poetry and song and few more widely distributed through the length and breadth of our land than the Sky-Lark. Countless numbers arrive on our shores during the autumn and winter months from Northern and Central Europe, while at the same time many of our home-bred birds, as well as immigrants, leave us during the cold season, moving southwards and westwards. The Sky-Lark is found breeding all over Europe, but the race which inhabits Southern Italy, South-eastern Europe, and the Mediterranean islands is said to be slightly different from the typical form. About the end of February or beginning of March the flocks break up and pairing begins, although they do not usually commence their nesting duties until the middle of April.

The nest is always placed on the ground, frequently in a slight depression in the soil concealed by a tuft of herbage on some grassy upland or perhaps more often among growing corn, which affords a safe retreat. It is composed of dead grasses, with a lining of finer fibres, and contains four or five eggs, occasionally only three; in ground colour greyish, with closely distributed olive-brown freckles and markings. Two broods are reared in the season, most of the young birds leaving the neighbourhood as soon as they are able to do for themselves.

The food consists of the seeds of weeds and other plants,



WOOD-LARK
SKY-LARK

as well as of greenstuff, insects, and small worms ; in time of snow they are often hard pressed for nourishment.

The most striking act in the life history of the Sky-Lark is his wonderful song, made even more effective by the manner in which it is delivered. This joyous and "heart-lifting" lay fills the air as the bird ascends higher and higher till almost out of sight, "melting in the flood of light," and is continued while he floats downwards, head to wind, then he ceases and drops like a stone. The song does not last for many minutes at a time, often for only two or three, and may sometimes be heard while the bird is perched on a post or bush or even on the ground.

When feeding Larks run swiftly and nimbly among the herbage, not hopping like so many small birds, and their long rather straight hind claw is well adapted to assist them in passing over the grass. They have a characteristic habit of standing erect, with raised crest as shown in the plate, and on other occasions will crouch, when they are easily overlooked owing to their colour harmonising so well with the ground.

When migrating Sky-Larks appear to be much attracted by any brilliant light, and great numbers out of the countless migratory flocks are lost at the lighthouses on our coasts.

On one occasion when I was working at night close to a lighted window, a Lark arrived out of the darkness and fluttered against the glass, until it was opened, when the bird entered the room.

This habit has been taken advantage of by the invention of an unsportsmanlike appliance, known as a lark-glass, which, attracting the birds, allowed them to be easily shot by a gunner stationed near.

Sky-Larks are fond of dusting their plumage, and also of bathing.

The sexes are alike in colour.

Length, $7\frac{1}{4}$ inches ; wing, $4\frac{1}{4}$ inches.

THE WOOD-LARK

Alauda arborea, Linnæus

PLATE 55

This species, easily distinguishable from the Sky-Lark by its smaller size, much shorter tail, and strongly marked whitish eye-streak extending to the nape, is local in its distribution and much less plentiful than the other.

It has been observed chiefly in the southern and south-eastern counties of England, being rare in the midland and northern parts, while it is only locally distributed in Wales, and rarely seen either in Scotland or Ireland.

It has decreased in numbers of late years, and is now unknown in some of its former haunts.

Throughout Europe it is found from the central parts of Scandinavia as far south as the Mediterranean and eastwards to the Ural Mountains.

The Wood-Lark breeds early in the year, beginning in March and continuing till May or June.

The nest is placed in a slight hollow in the ground, concealed by a grass tuft or small shrub, and is made of bents with some moss, and lined with finer grasses; the materials being more firmly compacted together than in the nest of the Sky-Lark. The four or five eggs are pale yellowish or greenish-white, spotted and marked with reddish-brown and violet-grey, while sometimes the markings blend into each other, forming a zone at the larger end. This species is more insectivorous than the Sky-Lark; in summer grasshoppers form a considerable part of its food, but seeds are eaten during the winter months, when the birds may be seen in small flocks, often squatting close to the ground in order to escape observation.

The Wood-Lark is one of our finest songsters, its flute-like notes being sweet and melodious, sometimes given while the bird is perched on a bush or tree, at others while it circles or hovers in the air. Lord Lilford considered the perfect melody of the song as second only to that of the Nightingale. The bird is said to sing sometimes at night. Its favourite haunts are about uncultivated ground, and although not actually inhabiting woods, it is seldom found far from trees and is partial to open spaces skirted by plantations in dry and sandy situations.

The sexes do not differ in colour.

Length, $5\frac{3}{4}$ inches ; wing, $3\frac{1}{2}$ inches.

THE CRESTED LARK

Alauda cristata, Linnæus

PLATE 56

Although fairly common as near our shores as the north of France, as well as in Holland and Belgium, the Crested Lark is but a rare straggler to England, only about seven occurrences having been noted.

Subject to variations both in form and colour, this bird is found in suitable localities throughout Europe, as well as in North Africa and Asia. The long slender feathers of the crest make it easy to identify the bird when compared with our common Lark.

The nest is generally placed on the ground, the slight depression caused by a hoof-print being often made use of, but Naumann says it is occasionally built on an old earth wall or among the thatch of a shed in the fields. It much resembles the Sky-Lark's, and contains four or five eggs, pale yellowish or greenish-white, spotted with olive-brown and violet-grey.

The food is also like that of other Larks.

The soft and pleasing song is delivered either from the ground or in the air.

It is a very tame and confiding bird, often frequenting the neighbourhood of villages and showing little fear of man, and when dusting itself on sandy ground or roads it will, if disturbed, merely fly a short distance before again alighting.

The female differs little from the male, being only slightly smaller.

Length, 7 inches ; wing, $4\frac{1}{8}$ inches.

THE SHORT-TOED LARK

Alauda brachydactyla, Leisler.

PLATE 56

This little Lark has occurred about a dozen times in England, and has also been obtained on four occasions on Scottish islands and once on Blackrock Light, Ireland. Most of the occurrences have been in autumn. It is common as a breeding species in Southern Europe, especially in the open tracts of uncultivated and sandy country of Central and Southern Spain, and also in North Africa, as well as in Asia.

The nest is situated in a hollow or hoof-mark in the sand, or under the shelter of a clod in fallow land, and is slightly constructed of grass-bents with a lining of hair, and sometimes two or three feathers. The eggs, usually four or five, are white, thickly freckled with ashy-brown.

The Short-toed Lark lives principally on seeds and has a loud but rather intermittent song, uttered sometimes while the bird is soaring aloft, sometimes on the ground.

The small size, short and conical bill, short hind claw, and dark shoulder spot, distinguish the bird from other Larks.

The sexes are alike in colour.

Length, $5\frac{1}{2}$ inches ; wing, $3\frac{1}{2}$ inches.

THE WHITE-WINGED LARK

Alauda sibirica, J. F. Gmelin

The first occurrence of this Eastern species noted in England was a bird caught alive near Brighton in November 1869, which had been consorting with some Snow-Buntings. Since that date about ten more have been obtained or observed in Kent and Sussex. It breeds among the steppes of Southern Russia, where it is quite common, and also in Asia from Turkestan to Siberia, migrating southwards and westwards in autumn.

The nest, usually begun in May, is built like those of its congeners on the ground in some small depression, sheltered by a grass tuft or bush. The eggs vary in number from three to five, and in colour are yellowish-white, with markings of dull brown and lilac-grey.

It frequents open country, and according to Pallas is often to be seen by roadsides, where it sings while fluttering in the air after the manner of the Sky-Lark, but with a shorter and somewhat different strain.

The adult male has the crown and ear-coverts chestnut ; eye-stripe, chin, and upper breast white ; upper parts of the body greyish-brown with dark streaks ; wing-coverts chestnut, and lower part of outer secondaries white, forming a conspicuous wing-bar. The two outer tail feathers are also white as well as the underparts of the body ; the throat, sides of the breast, and flanks are marked with brownish spots.

The female is smaller and duller in colour than the male.

Length, $7\frac{1}{2}$ inches ; wing, $4\frac{5}{8}$ inches.

THE CALANDRA LARK

Alauda calandra, Linnæus

Two specimens of this Lark have been recorded from St. Leonards-on-Sea, Sussex, May 1916. It is characterised by its large size and thick heavy bill. In colour the upper parts of the head and body are brown or greyish-brown with darker streaks, the chin, throat and underparts white.

On each side of the neck is a large black patch and the upper breast is buffish-white with dark centres to the feathers.

Length, about $7\frac{3}{4}$ inches ; wing, $5\frac{5}{8}$ inches.

THE BLACK LARK

Alauda yeltoniensis, Forster

A small flock of this large-billed and very striking species visited the borders of Sussex and Kent in January 1907, of which four were obtained, the last being shot on 18th February of that year. Previous to their arrival the weather had been very cold and stormy. Three more were obtained or seen in January and February 1915.

The home of the Black Lark is among the steppes of Southern Russia, and east of the Caspian Sea as far as the Yenesei, but the bird wanders occasionally in winter to Europe.

The nest is loosely constructed and placed on the ground. It contains four or five eggs, in colour white, mottled with umber-brown and grey.

The food consists of seeds, especially those of the salt-flavoured plants of the steppes, and in time of snow, when hungry, it frequents roads in company with flocks of other species.

Its song is said to resemble the Sky-Lark's, and like the Shore-Lark it leads a wandering life in winter, but little is known of its habits.

In winter the adult male has the bases of the feathers on the head and body black tipped with broad buffish-white margins, especially on the upper parts, which give a curious mottled appearance to the bird. The wings and tail are also fringed and tipped with the same colour. In summer the light-coloured tips become worn and nearly disappear, when the plumage becomes almost entirely a deep black.

The female in summer has the upper parts light-buffish brown, with darker markings of brown, is rufous on the lower part of the back, while some of the primaries and tail feathers are edged with white. In winter the colour in general is more bleached and hoary.

Length, $7\frac{1}{2}$ inches ; wing, $5\frac{5}{16}$ inches.



SHORT-TOED LARK

SHORE-LARK

CRESTED LARK

THE SHORE-LARK

Otocorys alpestris (Linnæus)

PLATE 56

The Shore-Lark has long been known as a winter visitor to our islands, the first having been obtained in March 1830 on the Norfolk coast. Of late years, during the months between autumn and spring, its visitations have greatly increased, and may now be considered as annual along the east coast and as far north as Fair Isle, Shetlands. It is very rare on the west coast of England and in Wales and has once occurred in Ireland.

During winter the Shore-Lark seems to lead a wandering life and in summer is found over a great part of Northern Europe, chiefly beyond the Arctic Circle, and also in Northern Asia and America.

The nest is invariably built on the ground, usually in some slight depression in the soil or among stones, being lightly made of grass and bents, and lined inside with the hair of the reindeer or with willow-down.

The number of eggs varies from three to five, and their colour is pale greenish-white, closely and irregularly marked with dull brown; occasionally the markings form a zone at the larger end.

The Shore-Lark breeds twice yearly, the broods afterwards forming flocks. Its food consists of seeds and insects, and its song, though brief, is full of melody, the birds singing in the air as well as on the ground. It is not shy and may be seen about the villages and towns of Northern Europe.

The female is rather smaller, has less black on the head and is duller in colour than the male.

Length, 7 inches; wing, $4\frac{1}{8}$ inches.

ORDER PICARIÆ

FAMILY CYPSELIDÆ

THE SWIFT

Cypselus apus (Linnæus)

PLATE 57

This well-known summer visitor to our islands often arrives in the south of England at the end of April, at which time I have seen it in the Isle of Wight, but in most parts the date of its coming is usually early in May. It leaves us rather suddenly and mysteriously about the middle of August or a little later, disappearing without the noticeable gatherings so often displayed by the Swallows and Martins before taking their departure. There are few parts of the country where it is not more or less plentiful, except in some portions of Northern and Western Scotland. It is widely spread over Europe during summer, as far north as Scandinavia and Russia, while in winter it retires to Africa and Madagascar.

It haunts the neighbourhood of towns and villages, the nest being placed in some recess or crevice in the darkness beneath the thatch or tiles of cottages and houses, under the beams in the roofs of churches, or sometimes in crannies in the rocky faces of cliffs ; a very small opening is sufficient for the entry of the bird, which can squeeze itself through a tiny crevice ; according to Gilbert White they even turn their bodies edgeways to effect their purpose. For the construction of the nest the bird collects straws, grass, wool, or feathers, gathered while on the wing, and glues these together with a glutinous secretion from the salivary glands. The two white eggs are rather rough in texture and elongated

in form ; they are usually laid at the end of May or beginning of June, and unless some accident happens no second brood is reared in the season, while birds have been known to abandon their young rather than delay their departure.

Much has been added to our knowledge of the mysterious life history and breeding of the Swift, hitherto so little known, by Mr. David Hamilton, whose notes have been published in *The Scottish Naturalist* (1924, pp. 77-83) by Mr. J. Kirke Nash. Among other interesting facts, it appears that both parent birds were usually found sitting side by side on the nest during the night, which disposes of the theory that Swifts spend the hours of darkness on the wing at high altitudes. Moreover, instead of being comparatively helpless on the ground, the old birds could run as fast as mice on the flat floor of the loft where they were breeding, and also rise from a flat surface without difficulty. During a spell of very cold and stormy weather five or six birds were observed huddled together, which accounts for their sudden disappearance from their usual haunts under such conditions.

Another interesting point is that the fledgling period in the young may last as long as forty-one days, and a few days after leaving the nest they start on their long journey southwards.

The shrill ringing scream of the Swift is a familiar summer sound as the birds dash along in their wild career, the clamour varying in intensity as they wheel round and about the steeples and buildings ; they show a marvellous power in guiding and controlling their flight, at times moving with rapid beats of their wings, then again gliding in long sweeps and curves. Their energy appears to be untiring, while they do not seem in any way affected by heavy rain.

During the long summer days they are capable of remaining on the wing from early morning until dark, and towards evening the birds may often be seen circling at an incredible height ; whether for recreation or after their food, which consists entirely of insects, it is difficult to say.

When they first arrive, Swifts are in the perfection of plumage, with a beautiful bronzy gloss on their feathers,

but before they leave us they become faded and bleached. The sexes are alike in colour.

The Swifts have now been entirely separated by naturalists from Swallows and Martins as it has been proved that they have no relation whatever to these birds. The foot of the Swift is of peculiar construction, having the four toes, which are short and strong, all directed forwards and the tarsus very short and feathered in front. This formation enables the bird to cling with great ease to the rough surface of a wall or rock when alighting at the nest.

Length, 7 inches ; wing, $6\frac{5}{8}$ inches.



SWIFT

ALPINE SWIFT

THE ALPINE SWIFT

Cypselus melba (Linnæus)

PLATE 57

The Alpine or White-bellied Swift was unknown in the British Islands until the summer of 1829, when the first example was obtained off the Irish coast. Some thirty others have since occurred in England and Wales, a few in Ireland, and several more in Scotland, where a small party stayed for some days in the neighbourhood of Corsewall Lighthouse, Stranraer, Wigtownshire, in September 1923.

This species is a summer visitor to the mountainous districts of Central and Southern Europe and North Africa, migrating in autumn to South Africa and Ceylon. It also breeds eastwards as far as the Himalayas.

The Alpine Swift builds its semi-circular nest within some cranny or recess in inaccessible rock faces or in the walls of lofty buildings, the old cathedral tower at Berne before it was removed having been one of their breeding stations.

The nest is composed of straws, grasses, feathers and other materials, gathered by the bird while on the wing, the mass being stuck together by saliva. The dull white eggs are generally two in number. According to Seebohm the cry of this Swift is shrill and tremulous and not quite so loud as that of our bird. The food consists entirely of insects.

The bird is easily distinguished on the wing from the Common Swift by its large size and white underparts, the expanse of wings being nearly double that of the latter species. There is no variation in the colour of the sexes, but in the young the feathers are more distinctly edged with whitish margins.

Length, $8\frac{1}{2}$ inches ; wing, $8\frac{7}{8}$ inches.

THE NEEDLE-TAILED SWIFT

Acanthyllis caudacuta (Latham)

This fine species, an extremely rare straggler from Eastern Asia and Australia, has only twice been obtained in England and has never hitherto been seen in Europe.

The first was shot at Great Horkesley, near Colchester, in July 1846, and the other near Ringwood, Hampshire, in July 1879, the last having had a companion which was not secured.

The breeding range of this large and long-winged Swift extends from Eastern Siberia southwards through Saghalien, Manchuria, Mongolia, and Japan, while the bird spends the winter in Australia and Tasmania.

General Prjevalsky found these birds breeding in river cliffs and in hollow trees, several pairs generally nesting in close proximity ; their notes are said to be weak, more like a Swallow's than the Common Swift's. The two or three eggs are white, and the bird subsists entirely on insects.

In colour the adult has the upper parts of the head and body dull brown or black with a greenish gloss, paler in the middle of the back ; the forehead at the base of the bill creamy-white, the throat, breast, and under the tail white, the belly dark brown. The wing-coverts and secondaries are bluish-green with some white on the inner webs of the latter. The long quill feathers of the wing are blackish glossed with green, and the tail feathers also green. The tail, of ten feathers, is short and square with the shafts projecting beyond the tips like needles. In the foot, the hind toe is directed backwards, differing in this respect from the two other species.

Length, 8 inches ; wing, about $8\frac{1}{8}$ inches.



LESSER SPOTTED
WOODPECKER (*male and female*)

NIGHTJAR

FAMILY CAPRIMULGIDÆ

THE NIGHTJAR

Caprimulgus europæus, Linnæus

PLATE 58

The Nightjar, also called the Fernowl and Goatsucker, and still known in country places by its old name of Puckeridge, usually arrives in England about the middle of May, though I have seen it as early as the end of April. During summer it is widely distributed over our islands, and leaves us in September for Africa, the latest date on which I have seen it in Surrey being the 13th of that month. In Europe it ranges as far north as Scandinavia and southwards to Spain.

The Nightjar makes no nest, laying its two eggs on the ground, usually in a clearing among trees, but sometimes in the open, sheltered by furze, brambles, or bracken; the eggs, which are elongated in shape, are white, marbled and veined with different shades of brown and violet-grey. One brood only is reared in the season, and in their first downy stage, before attaining their powers of flight, the young often move a short distance from their birthplace, and are fed by their parents until after they are able to fly.

The food consists of insects, large moths and cockchafers forming a good part of it; these are caught on the wing during the hours of twilight and darkness, the bird being crepuscular and nocturnal in its habits. The wing-cases and other indigestible parts are ejected in the form of pellets from the mouth.

Perched on a bare branch, the bird utters his loud and singularly vibrating song, which often lasts for several

minutes at a time, and has been likened to the whirr of a spinning machine. It is usually heard between twilight and dawn, but is said to have been noticed occasionally in the daytime. Often when on the wing in early summer the male gives out a sharp whistling note, and at times produces a rather loud clap by the striking together of its wings after the manner of a pigeon.

During daylight the Nightjar drowzes with closed eyelids, either crouching on the ground or on the bough of a tree, usually perched so that the body of the bird is placed lengthways in a line parallel to the branch, and not across it; as far as I have been able to observe, with the head held a little higher than the body, as shown in the plate, which was sketched from life. The bird seems to delight in the warmth of the sun, and may often be seen basking and dusting on sandy footpaths or in sheltered corners, where the curiously mottled and highly protective colouring of the plumage helps to conceal the bird. When disturbed during the day, as it flops into the quiet of some shady retreat, one can form no idea of its wonderful powers of flight as displayed in the dusk of the evening, when the birds are fully awake, swooping with marvellous speed in pursuit of their prey, or toying and twisting in the air as they chase one another. The foot of this bird is extremely small, and no quite satisfactory reason appears to have been discovered for the curious pectinated or comb-like edge on the inner side of the middle claw, unless it be to enable the bird to sit more securely when settled along a branch, or to clear the remains of beetles or other insects from the bristles of the mouth.

The female resembles the male in colour, but is slightly less rufous and is without the bold white spots on the three first quill feathers of the wing and on the two outermost feathers of each side of the tail.

Length, $10\frac{1}{2}$ inches ; wing, $7\frac{1}{2}$ inches.

THE RED-NECKED NIGHTJAR

Caprimulgus ruficollis, Temminck

The only British example of this beautiful Nightjar was shot on the 5th of October 1856 at Killingworth, near Newcastle, and recorded by the late John Hancock. It is common in many parts of southern Spain and Portugal, and also in Morocco, while a paler form of the same bird occurs in Tunisia and Algeria.

Lord Lilford says, in his work on British Birds, "it is very common in most parts of Andalusia during the summer months, especially frequenting the sandy pine-woods, though by no means infrequently met with also in the shrub-grown wastes." He also states that in comparison with the Common Nightjar "there is a very perceptible difference between the 'churring' notes of the two species."

Their eggs are very much alike and there is apparently very little difference in their food and habits.

This species is rather larger than our Common Nightjar, is paler in colour, but more rufous on the wings and underparts of the body; a distinct band of tawny-buff encircles the head, and the throat is boldly marked with white. According to Howard Saunders' *Manual* the white spots on the primaries and tail are not confined to the male in this species.

Length, 12 inches; wing, $7\frac{3}{4}$ inches.

THE EGYPTIAN NIGHTJAR

Caprimulgus ægyptius, Lichtenstein

The Egyptian or Isabelline Nightjar is another rare species, one example only having been obtained in England. This was shot near Mansfield, Nottinghamshire, by the gamekeeper of Mr. J. Whitaker of Rainworth Lodge in that county, on 23rd June 1883, and is now in his collection.

This species is found in Egypt, Nubia, and across South-western Asia to Afghanistan and Baluchistan. It makes no nest, the two eggs of a dingy yellowish or greyish-white, with pale ashy-grey markings, being laid on the desert sands.

The male and female are alike in colour, and both lack the white wing and tail spots so marked in both sexes of the Red-necked Nightjar, and also in the male of our common bird.

Length, $10\frac{1}{2}$ inches ; wing, just over 8 inches.

FAMILY PICIDÆ. SUBFAMILY IYNGINÆ

THE WRYNECK

Iynx torquilla, Linnæus

PLATE 60

This summer visitant to England usually arrives in the first or second week in April, the earliest date on which I have noted it in Surrey being the 4th of that month, while it takes its departure in September. Coming usually about the same time as the Cuckoo, it is often called the Cuckoo's mate, and in my neighbourhood it is known to country people as the "rinding bird," from its arrival coinciding with the time of rinding or stripping the bark from the oak.

It is not an uncommon bird in the south-eastern counties of England, but is scarcer in the west and very rare in the north, while in Scotland and Ireland it is only known as a passing migrant.

It breeds throughout the greater part of Europe, and in many of the temperate regions of Asia, retiring for the winter months to tropical Africa.

Not till some time after its arrival does the Wryneck begin its nesting operations, although it may be seen about the neighbourhood of its nesting-hole as soon as it reaches this country. It returns year by year to the same spot, and generally selects some hole in a fruit or other tree in which to deposit its eggs, and if it once takes to a nesting-box will return regularly to it. I have had many opportunities of watching a pair which took possession of one fixed to the boarding of a shed in my garden. They frequent the neighbouring trees for some time before the eggs are laid, and were it not for the peculiar cry of the male, which

bears a strong resemblance to the call of a Kestrel or Hobby, and is delivered as he sits stiffly on the bough of a tree, the birds might easily pass unnoticed, so quiet and unobtrusive are their actions.

No materials are gathered on which to lay the eggs; they are merely placed on the wood within the hole, although if the site has been previously occupied by any nest-building bird, they are laid on the top of this ready-made structure. In number the eggs vary from seven to ten, but if these be removed the bird will continue to lay, as many as forty-two having been recorded as taken from one nest by Mr. Norgate between the 29th of May and the 13th July, 1872. The eggs are pure white.

The food consists almost entirely of insects, the bird being especially fond of ants and their pupæ, hence the old Norfolk name of "Emmet eater." When feeding the Wryneck consequently spends a good deal of its time on the ground. The curiously long and pointed tongue is well adapted for capturing insect prey, having ducts which convey a sticky secretion to the sharp and hard tip, enabling the bird to procure its food with great ease and rapidity. The Wryneck has a singular habit from which it derives its name, of turning and twisting its head and neck if disturbed at its nesting-hole or taken in the hand, and it will feign death when captured in order to effect its escape.

This ruse was noticed long ago by Sir Thomas Brown, of Norwich, who in his notes on birds found in Norfolk speaks of the Wryneck, or "Hobby bird," as he calls it, "as maruellously subiect to the vertigo." By way of repelling an intruder to its nesting-hole it will also utter a sharp hissing sound which, coming from the darkness of its retreat, often gives the impression that a snake has sheltered therein. The young also make a similar noise when disturbed.

The female is like the male in colour, but is slightly duller.

Length, 7 inches; wing, $3\frac{1}{8}$ inches.



GREEN WOODPECKER /

GREAT SPOTTED
WOODPECKER (*immature*)

SUBFAMILY PICINÆ

THE GREEN WOODPECKER

Gecinus viridis (Linnæus)

PLATE 59

The Green Woodpecker, the most common of the three species inhabiting this country, is plentiful in many of the wooded districts of the southern and midland counties of England, including the Isle of Wight, and also Wales.

Scarce in the northern parts, it is hardly known in Scotland or Ireland and does not breed in the latter countries. It is found nesting over the greater part of Europe, ranging as far north as Norway and the neighbourhood of Petrograd, while it also inhabits parts of Asia. It has been subdivided into various local races by some authorities.

The nest is made within the hollow core of a decaying branch or trunk of a tree, one of the softer-wooded kinds, such as the elm, ash, poplar, or willow, being preferred to the beech or oak. Into this a circular hole is cut, about $2\frac{3}{8}$ inches wide, by the chisel-like bill of the bird running in a horizontal direction until the rotten wood is reached, when a cavity is dug out in which to lay the eggs. The chips of wood are thrown out at the entrance as the birds proceed with their work, the litter at the roots of the tree affording a good indication of where the nest is. The five or six eggs, which are of a beautiful shining white, are laid either on the bare floor of the hole or on some of the chips which may not have been removed.

The food of the Green Woodpecker consists of insects of various kinds, ants and their pupæ being much sought after; on such occasions the birds may be seen hopping in a curious,

ungainly manner on the ground. When searching for timber-beetles and grubs in trees, it begins near the ground and works upwards, usually in a spiral course with short quick jumps, using the tail as a support and inserting its long and sticky tongue, which has also some barbs at the tip, into the cracks and openings of the bark, while it occasionally stops to cut away a piece of bark or decayed wood which may conceal some delicacy within. The bird will sometimes lower its position on the trunk by a sudden jerk of the body tail downwards.

The Green Woodpecker, or Yaffle as it is called in country places, on account of its loud laughing cry, which has a fine joyous ring in it, especially during the breeding season, is shy and solitary in its habits, and haunts the neighbourhood of old timber trees in parks and woods, though it may sometimes be seen in the open. When in fear or distress the bird utters piercing and discordant cries, such as I have heard when one has been chased by a Sparrow-Hawk. It is easy to distinguish the bird at a considerable distance when on the wing, as it alternately rises and falls during flight.

The female differs from the male by having less red on the head, and none on the dark patch at the base of the bill, which is entirely black.

In the immature bird the plumage is more or less streaked, spotted, and barred.

Length, $12\frac{1}{2}$ inches ; wing, $6\frac{3}{8}$ inches.

THE GREAT SPOTTED WOODPECKER

Dendrocopus major (Linnæus)

PLATES 59 and 60

The Great Spotted Woodpecker, or, as it is often called, the Pied Woodpecker, is much less common than the species last described, although it is much more abundant than many people suppose, owing to its shy and retiring habits. It is widely distributed over the southern and midland parts of England in woodland districts, becoming rare or absent in some of the northern counties. It is also found in Wales. In Scotland it breeds as far north as Pitlochry, Perthshire, where I saw a freshly made nesting-hole in 1924, and it is said to have nested in Aberdeenshire in 1903. It is only known in Ireland as a rare vagrant. On the Continent of Europe, where it is represented by several different forms, it ranges as far north as Scandinavia and Russia and southwards to the Mediterranean countries. It also inhabits North-west Africa and Asia.

This Woodpecker either cuts for itself a nesting-hole—barely two inches in width—in a tree or occupies a ready-made cavity which is often enlarged to suit the bird's requirements, oaks being often selected and sometimes beech. The five to seven eggs are either laid on the bare wood or on chips left in the hole, and are pure white in colour.

In spring the bird produces a loud jarring note, caused by the rapid tapping of the bill against a bough, which is used as a sounding-board, the strokes being delivered so rapidly as to be almost invisible.

Mr. J. G. Millais informs me that he does not think this species makes the long rattle of the Lesser Spotted Wood-

pecker, but only a short one, while the calling note is "Pleek-Pleek—Pleek-Pleek"; it also makes a single flute-like note when flying.

This bird appears to be much less insectivorous than the Green Woodpecker, and although insects undoubtedly compose the bulk of its food, it readily feeds on nuts and berries, and I am assured by a friend in my neighbourhood that the young, after leaving the nest, have come to the green peas in his garden. It will also fix the cones of the Scots pine in crevices of the bark of those trees, in order the more easily to extract the seeds.

The adult female differs from the male in having no crimson on the head, while the young of both sexes have the whole crown of that colour, as shown in Plate 59.

Length, $9\frac{1}{2}$ inches ; wing, $5\frac{1}{2}$ inches.



WRYNECK
GREAT SPOTTED WOODPECKER (*male and female*)

THE LESSER SPOTTED WOODPECKER

Dendrocopus minor (Linnæus)

PLATE 58

This little bird, which should be more properly called the Barred Woodpecker, is not at all uncommon, though more often heard than seen, in the woodland parts of the southern and midland counties of England and also in the eastern portions of Wales. In the north of England it becomes scarce, while it has only once occurred in Scotland. In Ireland the records of its capture are not reliable.

In Europe the Lesser Spotted Woodpecker is found as far north as Scandinavia and Russia, and ranges eastward across parts of Siberia and Central Asia to Japan. It also inhabits North and North-west Africa. Various allied forms occur.

In May the glossy white eggs are laid in the nesting-hole, which is similar, but, of course, smaller than that of the other Woodpeckers, and generally situated at a good height from the ground. They are placed on the bottom of the cavity, in which chips are sometimes left, and vary in number from five to eight. This species appears to feed entirely on insects and their larvæ obtained on the trees.

Both sexes have a short call-note, rapidly repeated, and also make the loud jarring sound resembling the rattle made by the Great Spotted Woodpecker, produced, according to Mr. J. G. Millais, by rapid hammering of the bill in a hole, which may be compared to a long-drawn guttural R. He also tells me that it utters a high-pitched note when flying.

The bird is active and restless in its habits, and usually haunts the upper branches of tall trees, especially those

whose branches are dead or decayed, and it is therefore comparatively seldom seen. In the young male the crown of the head is red, as in the adult bird, while the young female has only the front of the head of this colour.

Length, $5\frac{5}{8}$ inches ; wing, $3\frac{1}{2}$ inches.

Several other species of Woodpecker, including the Black Woodpecker, native to foreign countries, are said to have been taken in the British Islands, but the records are either unreliable or refer to birds which have escaped from confinement.

FAMILY ALCEDINIDÆ

THE KINGFISHER

Alcedo ispida (Linnæus)

PLATE 61 (*Frontispiece*)

This beautiful bird, remarkable for the gem-like brilliance of its plumage, is found generally over the British Islands, and although well known, is by no means common, owing to the persecution it receives on account of the value of its feathers for the dressing of artificial flies, and the demands of millinery ; it is also much sought after as a subject for the bird-stuffer, and a good many are unfortunately destroyed by the owners of fishings. In Europe it ranges from Scandinavia and Russia to the Mediterranean.

The Kingfisher generally chooses for its nesting-site a steep bank by a pond or riverside, in which by digging with its bill it excavates a tunnel with an upward slope, penetrating about two feet into the soil, although the distance may vary. The entrance is narrow, but is made wider and rounded at the extremity in order to accommodate the sitting bird and nestlings.

There is no real nest, the eggs, which are glossy white and from six to eight in number, being merely laid on an unsavoury deposit of fish-bones, cast up in the form of pellets by the birds. Amid these unpleasing surroundings the eggs are hatched, and as the young gain strength they come to the mouth of the passage to receive the small fishes brought in rapid succession by the parents.

After leaving the nest, and before they are able to fend for themselves, the little birds form a charming picture as they sit in a row on a bough waiting to be fed. The food

consists of small fish, such as minnows, sticklebacks, and other kinds, as well as tadpoles and aquatic insects ; small crustaceans are also taken. The Kingfisher's manner of fishing is to remain motionless on the bough of a tree, post, or some other point of vantage by the water, until its prey comes within reach, when with a sudden dash into the stream it is secured, carried to a branch, and speedily killed by a few sharp strokes against the perch, when with a dexterous movement it is so held as to be always swallowed head foremost. Sometimes the bird may be seen hovering over the water before darting on its prey.

The note of the Kingfisher is a clear whistling cry, several times repeated. The flight is straight and rapid, usually carried out close to the water and following the turnings of the river, though the bird will often travel some distance over ground away from any stream. During the greater part of the year it is rather a solitary bird, and suffers much in severe weather owing to its food supply being cut off by the freezing of the waters, and at such times it commonly makes its way to tidal estuaries on the seashore, when small fish and marine crustaceans supply its wants.

The sexes are alike in colour, the female being perhaps slightly duller.

Length, $7\frac{1}{2}$ inches ; wing, 3 inches.

FAMILY CORACIIDÆ

THE ROLLER

Coracias garrulus, Linnæus

PLATE 62

Since Sir Thomas Browne first recorded the occurrence of this gaily-painted species in Norfolk, now more than two hundred and sixty years ago, a large number have reached our shores, over a hundred having been noticed, mostly in the southern and eastern counties of England. It has also occurred in Scotland as far north as Caithness, the Orkneys and St. Kilda, and owing to the conspicuous brilliance of its plumage few of these visitants have escaped destruction.

In summer it is found over a great part of Europe, being plentiful in the Mediterranean countries, and in North Africa. It also reaches Western Siberia, and winters in South Africa and India.

The Roller generally selects for its nest a hole in a tree or in some bank or cliff, but a cavity in a ruined wall is also sometimes chosen. A light fabric is put together of twigs and dead grasses, in which it lays from four to six shining white eggs, globular in shape.

It feeds chiefly on grasshoppers, beetles, and other insects captured on the ground, and according to Lord Lilford, it occasionally takes frogs and small reptiles.

Its notes are harsh and discordant, and it is by nature a restless, shy, and wary bird, constantly flitting from branch to branch or swooping to the ground to capture its prey, and haunting more or less open country.

At times, especially during the breeding season, it performs

somersaults and other curious gymnastic antics in the air, hence its name of "Roller."

It usually selects a dead bough or some isolated tree-top as a lookout station, from which it sallies after food.

There is no difference between the male and female in colour, but the immature birds are duller.

Length, $11\frac{3}{4}$ inches ; wing, $7\frac{5}{8}$ inches.



ROLLER

BEE-EATER

THE BEE-EATER

Merops apiaster, Linnæus

PLATE 62

Over forty examples of this rare visitant to the British Islands have been obtained in England and others seen, while over thirty more have been recorded in Scotland and in Ireland.

Strange to say, a pair of these delicate birds attempted to nest in Scotland in 1920, an interesting account of which is given by Dr. Eagle Clarke in the *Scottish Naturalist* for that year (pp. 151-153). The birds took up their quarters on a sand-bank by the river Esk, at Musselburgh, Midlothian, on June 3rd, when they made and occupied a hole for some days. Unfortunately the female was afterwards found in an exhausted condition and died after laying an egg, while the male only remained in the neighbourhood for a few days before disappearing.

The Bee-eater is abundant in the south European countries, and is found eastwards as far as Western Siberia, Afghanistan and Kashmir. In winter it migrates to tropical and South Africa and India.

The birds usually breed in colonies, boring deep holes in river banks, and sometimes in open and uneven ground. Referring to the latter breeding-places, Colonel Irby says (*The Ornithology of the Straits of Gibraltar*, 2nd ed. p. 132), "The shafts to these nests are not usually so long as those in banks of rivers, which sometimes reach to a distance of eight or nine feet in all; the end is enlarged into a round sort of chamber, on the bare soil of which the usual four or five shining white eggs are placed." The same authority observed

that the bills of the birds, after boring the holes, "are some times worn away to less than half their usual length."

The food consists of winged insects, such as bees and wasps, while its note is described by Howard Saunders as "a sharp *quilt*."

The foot of the bird is peculiar, the middle toe being joined to the outer one as far as the second joint, and as far as the first joint of the inner toe.

The female is not so bright as the male, and has the two middle tail feathers shorter.

Length, $11\frac{1}{4}$ inches ; wing, 6 inches.



HOOPOE

FAMILY UPUPIDÆ

THE HOOPOE

Upupa epops, Linnæus

PLATE 63

This bird is a regular spring visitor to the southern parts of England, and were it not for the senseless and constant persecution it receives at the hands of the collector of bird skins and others, would no doubt breed annually in this country. It is known to have done so on several occasions, but very few of the birds which visit us escape destruction, as they are conspicuous, very tame and confiding, and have little fear of man.

It was evidently more often seen in former days than now, as Sir Thomas Browne in his list of birds found in Norfolk, written more than two hundred and fifty years ago, quaintly describes it as “Upupa or Hoopebird so named from its note a gallant marked bird wch I have often seen & tis not hard to shoot them.”

The Hoopoe is a common species in Southern Europe, and breeds throughout the Continent, ranging as far north as South Sweden, inhabiting also Western Siberia and other parts of Asia, including North-western India.

It usually nests in a hole in a tree, such as the ash or the willow, or in a cavity in a rock or wall, the few twigs, grasses, etc., which compose the nest being set in an accumulation of ordure. From four to seven eggs are laid, of a pale greenish-blue, which soon lose their beautiful colour.

It feeds on insects, worms, and grubs, sought for among manure in pasture lands and roads. The singular and far-

reaching note of the Hoopoe is a hollow-sounding whoop, repeated several times in succession.

The birds spend a good deal of their time on the ground, where they "march about in a stately manner," as Gilbert White observes, at times erecting their showy crest if alarmed or excited and when first alighting.

The female is hardly so brightly coloured as the male.

Length, $9\frac{3}{4}$ inches ; wing, $5\frac{3}{4}$ inches.



FAMILY CUCULIDÆ

THE CUCKOO

Cuculus canorus, Linnæus

PLATE 64

Looking over my notes, kept for a number of years in succession, on the first coming of the Cuckoo in Surrey, I find the earliest date is the 10th of April, and though the bird usually appears shortly after that time, Mr. Millais and others have recorded its occasional arrival in the south of England as early as the end of March.

The males, travelling in advance of the females, soon announce their presence by their well-known call, which continuing throughout the month of May, becomes broken and hoarse before ceasing in June. Towards the end of July or early in August the old birds disappear, the young following them a little later.

Soon after their arrival the birds spread over the country, reaching the northern parts of Scotland shortly after the beginning of May. During summer the Cuckoo visits the whole of Europe, ranging from within the Arctic Circle to the Mediterranean countries, and also over a great part of Asia, while in winter it retires to South Africa, India and other parts of Southern Asia.

Owing to the Cuckoo's strange habit of entrusting the care of its eggs and the upbringing of its young to foster-parents of other species, it has long attained a notoriety possessed by few other birds.

Until Mr. Edgar Chance published an account of the breeding habits of the bird, after watching the female for several seasons in succession, it was generally supposed that

she first laid her egg on the ground and then deposited it in the nest of the bird she had selected as foster-parent. He has now proved by careful observation and photography that the Cuckoo quickly approaches the nest, picks up in her bill one of the eggs it already contains, and immediately lays one of her own in its place. From fifteen to twenty-one eggs were noted to have been laid by a single female in the season. The nests of various species are selected, including the Meadow- and Tree-Pipit, Pied Wagtail, Reed-Warbler, Robin, and other soft-billed birds, but individual Cuckoos generally keep to one particular species to which to entrust their eggs. The eggs are remarkably small for a bird of the Cuckoo's size, and vary a good deal in their markings and colour, but apparently each female always produces eggs of the same type. These may be greenish- or reddish-grey, with close specklings of darker shades, or occasionally pale blue, and sometimes, but not always, resemble the colour of the foster-parents' eggs. Not long after being hatched, the young Cuckoo contrives to hoist its fellow-nestlings on to its back, which for the first twelve days or so has a convenient hollow, and with more or less violent efforts heaves them one by one over the edge of the nest.

When feeding, the Cuckoo will perch on the branch of a tree, from which it sallies to pick up the hairy caterpillars and occasionally worms, on which it feeds.

The familiar song of the male need not be described, but I have never seen any account of the curious fact that it is uttered with the bill closed, as when a pigeon coos. My attention was first drawn to this by the late J. Wolf many years ago, and I have since had many opportunities of verifying it. The sketch of the bird in the plate was taken from life with the aid of a field-glass, and shows the attitude assumed when the notes are produced. The bird sits more or less in a horizontal position, with wings drooped below the tail, which is spread and slightly raised, while a swaying motion is given to the body and the throat is puffed out.

The female does not usually differ much from the male, but is occasionally tinged with rufous on the breast; she

appears always to be less numerous than the other sex, and leads a wandering life. She has not the "plain song" of her mate, but produces an entirely different sound, which Seebohm compares to the noise of bubbling water.

The young birds are barred on the upper parts with blackish-brown and rufous, with some of the feathers tipped with pale buff or whitish, and with a white patch at the back of the neck. The underparts are buffish white and also barred. The tail is barred and tipped with white.

Length, 13 inches ; wing, $8\frac{1}{2}$ inches.

THE GREAT SPOTTED CUCKOO

Coccystes glandarius (Linnæus)

This large Cuckoo is a very rare visitor to the British Islands, four specimens only having been recorded, viz. the first captured on Omey Island, off the Connemara coast, about 1842, the next near Bellingham, Northumberland, another on the Denes, Yarmouth, and the last seen at the Skellig Rock, County Kerry, by the lightkeeper there.

The Great Spotted Cuckoo is found in South-western Europe, particularly Spain and Portugal, ranging across Asia Minor to Persia. It also inhabits North Africa, retiring in winter to tropical and South Africa, where it also breeds.

It is said always to place its eggs in nests belonging to the Corvidæ (Irby); their colour is pale bluish-green, spotted with reddish-brown and purplish.

Howard Saunders describes the note of the male as a harsh "*kark-kark*," and the female's as "*burroo-burroo*."

Both male and female adult birds have a long and distinct pointed crest, bluish-grey in colour; the lores and ear-coverts of a darker tint. The upper parts are greyish-brown, the feathers mostly tipped with white; the two central tail feathers also greyish-brown, the rest marked with white. The chin, throat, and sides of the neck cream colour, the underparts whitish-cream or dull white.

Length, $15\frac{1}{2}$ inches; wing, 8 inches.

THE AMERICAN YELLOW-BILLED CUCKOO

Coccyzus americanus (Linnæus)

This species during the breeding season inhabits the temperate parts of North America, and migrates by way of the West Indies and Central America to pass the winter in South America. It has occurred about a dozen times in the British Islands.

Unlike our common Cuckoo, it makes its own nest and rears its young, although the egg has been found on rare occasions in the nests of other species. The eggs, seldom more than four in number, are pale green in colour.

Its notes are said to resemble the word *cow*, repeated eight or ten times, and the sexes are alike in colour, the adults having the upper parts of a glossy greenish-brown, with some reddish chestnut on the quill feathers of the wing and white tips to some of the tail feathers; the underparts are white. The upper part of the bill is blackish, the edge of the upper mandible and the whole of the lower except the tip, bright yellow. The feet are slaty-grey.

One example of another New-world species, the American Black-billed Cuckoo, *Coccyzus erythrophthalmus* (Wilson), has been recorded in Ireland, this having been shot at Kilbead, County Antrim, about 25th September 1871.

It inhabits North America and Canada, migrating in autumn to South America. It resembles the species last described in its habits and nidification, but differs in colour, having the bill entirely black, the orbits red, a more decided brown on the back, and is without the chestnut on the primaries.

Length, 11 inches; wing, $5\frac{5}{8}$ inches.

ORDER STRIGES

FAMILY STRIGIDÆ

THE BARN-OWL

Strix flammea, Linnæus

PLATE 65

The Barn, White, or Screech-Owl, as it is variously called, is a fairly common bird throughout the British Islands, although scarce in northern Scotland. It has a very wide geographical range in both the old and new worlds, and shows some variation in colour, the race inhabiting southern Sweden, Denmark, and Central Europe having a darker breast than our bird.

This species dislikes sunlight and selects for its retreat by day or for its nesting-place some dark recess in the walls or under the roof of old buildings, church towers, or in hollow trees, while dovecots are often chosen. For several years in succession a pair occupied a dovecot in my garden, and it was evident that what they most appreciated in their home was to have as little light as possible. By placing an inverted wooden box in the darkest corner, to which access was obtained by a hole cut in the side, the owls were induced to breed regularly, always, however, leaving the place after the young were able to fly in August, and returning early in the spring.

The eggs, which are pure white, usually number six or more and are placed among old castings, without any nest. As soon as the first one or two are laid, the bird begins to sit, and thus the young are hatched at various times, the eldest of the family helping to incubate the later eggs.



BARN-OWL

The owlets, at first clad in white down, are fed through the evening and night, and a supply of dead mice may often be found close beside them in the daytime. During the day as well as by night, they utter a curious sound, like that made by the valve of a cistern.

The food consists almost entirely of mice, rats, voles, bats, and shrews, the Sparrow being the only bird whose remains I have found at the nest referred to. The young seem to be able to bear great heat without any inconvenience, as when a July sun was beating on the roof of their dwelling the heat inside was suffocating.

About the time of twilight when the mice come out to feed and play, the owls begin their hunt, beating along the hedges and among the trees of orchards with noiseless flight not far from the ground and dropping suddenly on their unsuspecting prey ; at times they utter a harsh weird cry, which can be heard a long way off.

The female is just like the male in colour and, as is the case with most birds of prey, is the larger bird.

Length of male, $13\frac{1}{2}$ inches ; wing, $11\frac{1}{4}$ inches.

Several occurrences of the Dark-breasted race inhabiting Central Europe have been noted in the British Islands.

THE LONG-EARED OWL

Asio otus (Linnæus)

PLATE 66

This species, a resident in the British Islands, frequents woods of pine and fir and sometimes open country, while in autumn its numbers are much increased by others which reach our eastern counties from abroad. It is widely distributed over Europe, inhabiting also North Africa and many parts of Asia.

The Long-eared Owl appropriates the former nest of a Magpie, Crow, Jay, or Woodpigeon, and sometimes the "drey" of a squirrel; these are made to suit the convenience of the bird by the addition of twigs or some soft material such as rabbit's fur. In March the bird lays from four to six smooth white eggs, and according to Mr. S. E. Brock (*Zoologist*, 1910, p. 117), incubation lasts twenty-eight to thirty days.

Occasionally this species will nest on the ground, when the nest resembles the Short-eared Owl's. It preys on rats, voles, and mice, while a good many small birds as well as beetles are taken.

Being nocturnal in its habits, it generally spends the day perched on a branch of a tree with its body held close to the trunk, and if disturbed in its sleep, has a quaint habit of raising its ear-tufts, and contracting the feathers of the body, which at the same time is stretched out to much more than its usual length, the bird meanwhile peering with half-closed eyes at the disturber of its peace below.

Mr. R. J. Howard, who has provided me with a number of notes on the Owls and other birds of prey, which I have freely used, informs me that in the breeding season the call



LONG-EARED OWL

of the male of this species is "hoo-hoo-hoo" repeated very slowly, and when the birds are disturbed at their nests the cry is "wack-wack," while that of the nestlings is a loud mewling.

The young often leave the nest before they are able to fly, and climb to it again aided by their bills. There are grey as well as rufous phases of plumage of the Long-eared Owl.

Length, 14 inches ; wing, $11\frac{1}{2}$ inches.

THE SHORT-EARED OWL

Asio accipitrinus (Pallas)

PLATE 67

Avoiding woodlands, this species is much more a bird of the open than other British Owls, frequenting stubble and turnip-fields, moors, furze-covered slopes, and marsh-lands. It breeds regularly in many parts of Great Britain, but much less frequently to the south of Lancashire and Yorkshire than in the north, while in Ireland it never nests. In the British Isles, it is not uncommon as a winter visitor from autumn to spring, and as numbers often arrive from overseas at the same time as the Woodcocks, it is sometimes called the Woodcock-Owl. In November I have seen a tired bird fly in from the sea and alight among the bents a few yards from high-water mark as shown in the plate. This species is widely distributed over both hemispheres, inhabiting Europe, Asia, Africa, and America.

The Short-eared Owl breeds late in the year, laying its creamy-white eggs in a slight cavity among the sedges or heather. They usually number from four to eight, but occasionally to twelve or even more. It is well known that under the stimulus of abundant food supplies, for instance during a plague of voles, the number of eggs laid is largely increased. The young ramble a considerable distance from the nest before they are fully fledged.

The food consists largely of voles, field-mice, rats, bats, small birds, and occasionally of fish, beetles, and large moths. During the periodical vole plagues, Short-eared Owls flock to the infested districts, and remain there as long as food is plentiful. They may often be seen hunting during daytime



SHORT-EARED OWL

with a buoyant unsteady flight, and do not seem inconvenienced by bright sunlight.

The note of this Owl when disturbed is somewhat like that of the Long-eared species.

Mr. R. J. Howard says that "when stooping down to examine a full-fledged young Short-eared Owl—one of a nest containing seven young and an addled egg—a parent bird struck me a resounding smack on the head, leaving marks of the claws on my hat. The following season at this spot, a bird, presumably the same, struck his claws into the nape of the neck of the gamekeeper, covering his collar with blood. On this Lancashire moor, which has been planted by the Liverpool Corporation, all Owls and Kestrels are strictly preserved for the purpose of keeping down the voles and field-mice which do great damage to the young forest trees. A large handful of castings taken here on the 24th May consisted altogether of the remains of Short-tailed Voles and one Shrew. There were no remains of birds. Four pairs of Short-eared Owls reared broods on this moor in each of the seasons mentioned above."

The sexes are alike in colour.

Length, $14\frac{1}{2}$ to 15 inches ; wing, 12 inches.

THE TAWNY OWL

Syrnium aluco (Linnæus)

PLATE 68

This species, also known as the Brown or Wood-Owl, is resident in most parts of Great Britain, and of late years has been introduced into Ireland. It is scarce in northern Scotland, but seems to be the most abundant of the Owls in most parts of that country. It inhabits the greater portion of Europe, occurring as far north as Scandinavia and south to the Mediterranean. Eastwards it ranges to Siberia, and is also found in Persia, Asia Minor, and Syria.

The Tawny Owl loves the shade of old ivy-covered trees, and early in the year lays its eggs within a hollow trunk or in the old nest of a Crow or Rook, although it will at times use a rabbit-hole or even the bare ground. The eggs vary in number, from three to five or six, and are rounded in shape and pure white in colour.

Its well-known hooting note, which has been rendered as "whoo hoo," is usually heard more often during the autumn and winter months than in the summer, and the cry when questing for prey on the wing is a shrill high-pitched double note.

The food consists chiefly of rats, mice, voles, small birds, and occasionally fish, and the bird should be carefully protected.

A form of this Owl sometimes occurs in Britain of a much greyer tone in the plumage than the usual tawny or rufous phase, the grey bird being the typical race on the Continent of Europe.

Length, about 15 inches ; wing, 10 inches.



SCREECH OWL



TENGMALM'S OWL

Nyctala tengmalmi (J. F. Gmelin)

PLATE 69

Tengmalm's Owl, a rare visitant to Great Britain, has been recorded about twenty times in England and seven in Scotland. Although migratory in autumn and winter, its home is in the forest regions of Northern Europe, and high up on the wooded mountain-sides of the central and eastern portions of that continent, while it also ranges into Siberia.

Its four to six—occasionally ten—white eggs are laid, according to Wolley, either in holes of trees or in the nesting-boxes placed by the Lapps for the use of Golden-eye and other ducks, and it is said to occupy the deserted nest of the Black Woodpecker.

Its food consists of lemmings and other small mammals, also of birds and beetles.

Wheelwright, in his notes on the ornithology of Lapland, describes its note as a "very musical soft whistle." The ear orifices in most Owls are not symmetrical, but the late Professor Collett has drawn attention to the fact that this want of equality extends to the skull in this species. It may readily be distinguished from the Little Owl by its rather dense but downy plumage, and the thick covering of feathers on legs and toes.

Length, 9 inches ; wing, $6\frac{1}{2}$ inches.

THE LITTLE OWL

Athene noctua (Scopoli)

PLATE 70

It is questionable whether the Little Owl has ever reached this country unassisted, the first having been taken alive near the Tower of London in 1758. As far back as 1843 Waterton is known to have turned out five near Wakefield, and since then large numbers, imported alive from the Continent, have been liberated by the late Lord Lilford in Northamptonshire, and by others in Hampshire and Yorkshire, whence it has spread far and wide over the country and has become a pest.

It inhabits Europe from as far north as the Baltic to the Mediterranean, slightly different races being found in North Africa and Western Asia.

The eggs, white in colour and numbering from three to five, are placed within a hollow tree or in some cavity in walls or rocks, or even in a hole underground.

A great part of the food consists of insects, mice, and other small rodents, but owing to its common habit of hunting in daylight, many small birds as well as young pheasants are caught and killed; it is therefore much disliked by other birds, and I have counted as many as seven different species clamouring round their enemy. It is fond of well-wooded country where there are plenty of old trees.

It has a monotonous double note. This Owl was accounted by the ancient Greeks as the bird of Pallas Athene, and hence its likeness is often to be found on their coins.

Length, 9 inches; wing, 6 inches.



LEAFY

1885



SNOWY OWL

THE SNOWY OWL

Nyctea scandiaca (Linnæus)

PLATE 71

This fine Owl is a circumpolar bird, breeding among the Arctic wastes of both hemispheres, and leaving its more northerly quarters in the winter to escape the rigours of the climate and consequent want of food.

Over twenty examples have been taken in England and about forty in Ireland, while in the northern parts of Scotland, especially in the Orkneys, Shetlands, and Outer Hebrides, it may be considered an annual winter visitor.

It breeds on the open fjelds and tundras away from forest growth, the nest being a mere depression in the moss-covered ground, though sometimes, according to Seebohm, made of "a few lichens, mosses, and feathers." It contains from six to eight or even more creamy white eggs, the incubation period being just five weeks.

The Snowy Owl feeds chiefly on the lemming and other small mammals, besides Ptarmigan, Willow-Grouse and Arctic hares, hunting by day as well as by night. Mr. Millais tells me that in Iceland the bird preys largely on fish, where he has seen it catching quite large char.

During the breeding season the male is very bold and aggressive and will attack anyone approaching the nest. The cry is loud and harsh.

Both sexes show great variation in the markings of the plumage, but the females are more strongly barred with dark than the males. The latter are sometimes almost entirely white, showing only a few brownish-black spots on their otherwise snowy feathers.

Length of male, 22 inches, wing $15\frac{1}{2}$ inches ; female, 25 inches, wing $17\frac{1}{2}$ inches.

THE HAWK-OWL

Surnia funerea (Linnæus)

PLATE 69

The Hawk-Owl, of which there are two forms, one inhabiting Northern Europe and Asia, and occasionally occurring in Alaska; and the other a native of North America—the *Surnia ulula caparoch* of trinomialists—is a rare visitor to the British Islands. Of the latter race, which differs mainly from the European bird in having the transverse bars on the breast broader and of a ruddier colour, four examples have occurred, while about an equal number of the former have been recorded.

The European Hawk-Owl—the bird shown in the plate—lays its eggs, white in colour and numbering from five to eight, in a hole in a decayed pine or fir, or in the nesting-boxes of hollowed trees set up by the peasants of Scandinavia for ducks.

It preys on lemmings, mice, and other rodents, as well as birds, such as the Ptarmigan, Willow-Grouse and Siberian Jay.

According to Mr. G. E. Lodge—who having had plenty of opportunity of watching the habits of this species in Norway, kindly lent me a series of sketches done from life which were a great help to me when making the plate—the Hawk-Owl usually takes up a position on the bare upper branch of a pine, keeping the body and tail in a much more horizontal position than other Owls, and with head pressed downwards watches with its keen yellow eyes for some movement that might betray the whereabouts of the prey below: they are very fearless and often show a considerable amount of bold curiosity at the sight of a human being,

frequently flying straight towards one, and settling on the top of a fir, either large or small.

The Hawk-Owl has a weird strange cry, and does not avoid sunlight.

Like other Owls, the female is larger than the male and shows no appreciable difference in colour.

Length, 15 to 16 inches ; wing from about $9\frac{1}{4}$ to $9\frac{1}{2}$ inches.

THE SCOPS-OWL

Scops giu (Scopoli)

PLATE 70

A good many examples of this little tufted Owl, the smallest known in this country, have occurred in the British Islands since 1805, when it was first observed in Yorkshire. It is common in summer in Southern and South-eastern Europe, ranging as far north as Germany and also breeding in Asia Minor, Palestine, and North-west Africa. In winter it migrates still farther south in Africa. The nest is usually within a hollow tree, where the bird lays five or six pure white eggs.

It is almost entirely insectivorous, feeding on beetles, moths and grasshoppers, and is seldom seen abroad during the hours of daylight, which are spent in drowsy slumber, the bird usually perching close to the trunk of a tree.

It has a curious monotonous cry, resembling the syllables *kew-kew*, constantly repeated.

I am indebted to my friend Mr. G. E. Lodge, for kindly lending me a sketch of this bird taken from life, which I made use of for the plate. This species is a much more slender and neater bird than the Little Owl, has distinct ear-tufts, and bare toes.

Length of male, $7\frac{1}{2}$ inches ; wing, $5\frac{3}{8}$ inches.



EAGLE-OWL

THE EAGLE-OWL

Bubo ignavus, T. Forster

PLATE 72

The Eagle-Owl, one of the strongest and most rapacious of the birds of prey, has occurred at various times in Great Britain, and although specimens seen or obtained in the Orkneys, Shetlands, the mainland of Scotland, and eastern parts of England were no doubt genuine visitants from Scandinavia, birds recorded elsewhere may have escaped from captivity, as it is often kept as a caged bird.

This species inhabits the wooded mountainous regions of Europe, from Scandinavia and Northern Russia to the Mediterranean shores, and other races have been recognised in Asia and North Africa. It breeds early in the year, and lays its eggs, usually two or three in number, rounded in shape and white in colour, in the deserted dwelling of some other bird in a tree. Often ledges of rock in sunny quarters on steep mountain-sides are chosen, or sites on the ground at the roots of trees, but in these places the bird does not construct a nest of its own, although often a kind of bed, on which the owlets repose, is formed by the accumulations of castings and fur.

The Eagle-Owl usually rests by day in some dark and shady retreat, and sallies forth in the evening in search of food. Owing to its size and strength it can without difficulty master birds as large as the Capercaillie, and hares, rabbits, and other game, as well as young fawns, form a great part of its food.

Its deep sonorous note, often heard in the breeding season, resembles its German name "Uhu."

Length of male, 24 inches, wing 18 inches; female, 25 inches, wing 18½ inches.

ORDER ACCIPITRES

FAMILY VULTURIDÆ

THE GRIFFON-VULTURE

Gyps fulvus (J. F. Gmelin)

An immature specimen of this Vulture was captured near Cork Harbour in the spring of 1843, and another is recorded by Howard Saunders as having been seen near Southampton Water many years later. It is a common bird in many parts of the Spanish Peninsula, and is found across Southern Europe to the Ural Mountains, also in Northern India and a great part of Africa.

The Griffon is gregarious during the breeding season, and builds its nest of sticks and grass on the ledges of cliffs or in rocky cavities; it lays one or two eggs, generally white, but sometimes blotched with reddish-brown. The bird feeds on the carcasses of animals, discovered not by scent but by its wonderful power of sight, each individual while aloft not only searching the ground, but keeping its eye on any tell-tale movements of its neighbours.

The adult bird is pale tawny-brown in colour, with brownish-black secondaries and black primaries and tail. The head and neck are clothed with yellowish-white down, the latter with a conspicuous white ruff. The underparts are streaked with buff. The bill is pale yellow, the cere and skin round the eyes bluish-grey.

The male, which is the larger bird, measures in length about 42 inches; wing, 29 inches.

THE EGYPTIAN VULTURE

Neophron percnopterus (Linnæus)

Two immature Vultures of this species were seen at Bridgewater Bay, Somersetshire, in October 1825, one of which was killed, and many years later, on the 28th September 1868, another was obtained at Peldon, Essex.

It has a wide range over Southern and Eastern Europe and is found as far east as North-western India, and over a great part of Africa. It appears to be migratory in many places, and is usually seen in pairs.

The nest is made of sticks and any kind of odds and ends the bird can find, and is generally placed on a ledge or in a cavity in a cliff, occasionally in trees. The two eggs are creamy-white in ground-colour, marked with brownish-red.

The bird feeds on reptiles, carrion of all kinds, and any filthy garbage it may come across, and therefore makes itself a most efficient scavenger in hot climates, where those useful members of society are non-existent.

In character it is timid and cowardly.

The adult bird is white in colour, with black primaries and paler blackish secondaries. The face and upper part of neck show the bare yellow skin and the lower neck has a ruff of long white feathers. The irides are red, the feet fleshy pink. For the first two or three years the young bird is brown, with the bare skin of the face grey ; the irides brown.

Length, 26 inches ; wing, 19 inches.

FAMILY FALCONIDÆ

THE MARSH-HARRIER

Circus æruginosus (Linnæus)

PLATE 73

The Marsh-Harrier, known to fenmen as Moor-Buzzard, although still occasionally visiting the British Islands in spring and autumn, has almost vanished as a resident species though it is known to have bred of late years in Norfolk, and a few pairs linger among the bogs of Ireland.

At one time this fine bird was common in the fens and marshy districts of our eastern counties, and in places suited to its habits in Dorset, Devonshire, and other parts of south-western England. It is still plentiful among the marshes of Central, Southern, and Eastern Europe, and also inhabits North Africa and Asia.

The nest is placed on the ground or in the water among reeds, sedge, and rushes, and is built of dead reeds, sedge, and grasses. The eggs, bluish-white in colour, and occasionally having faint brownish markings, are four or five in number.

According to the late Henning Weis (*Life of the Harrier in Denmark*), the male Marsh-Harrier, during the breeding season, will make a kind of nest for himself as a resting-place or where his prey can be eaten in quiet.

The food consists of frogs and various reptiles, eggs and young of waterfowl—especially those of the Coot—or disabled marsh-birds, which are pounced upon as the Harrier slowly quarters the ground in regular beats, flying low down and moving backwards and forwards with steady flaps of its broad and long wings. According to Lord Lilford



MARSH-HARRIER

and other authorities, the female when sitting is fed by the male, who while hovering above the nest, drops the prey to his mate.

It is only the fully adult male which shows the distinctive grey colouring on the wings and tail, as represented in the plate. The female has the tail and underparts brown, with some creamy-white on the shoulders of the wings. The second figure in the background gives the plumage of the young in the first year, with the conspicuous light buff-coloured head, which gave it the name of Bald Buzzard.

It may be noted here that the Harriers have a distinct frill of small close-set feathers passing from the sides of the head round the neck, causing a resemblance to the facial disc of the Owls, but according to Professor Newton (*Dictionary of Birds*): "No osteological affinity, however, can be established between the Harriers and any section of the Owls, and the superficial resemblance will have to be explained in some other way."

Length of male, $21\frac{1}{2}$ inches ; wing, 16 inches.

THE HEN-HARRIER

Circus cyaneus (Linnæus)

PLATE 74

This Harrier, which shows such a striking difference in the size and colour of the sexes as to have caused them at one time to be considered different species, is resident, though gradually diminishing in numbers, in some of the wilder parts of the British Islands. A few still breed in the Orkneys, Outer Hebrides, and Ireland, and within recent years it has been recorded as nesting in southern and south-western England and in Wales. It has a wide breeding range in Europe, from as far north as Scandinavia and Russia, to Spain and Italy, whilst in winter it visits North Africa and Asia.

The Hen-Harrier haunts rushy, furze-covered land or moors and hill-sides clothed with heather and broom, and nests on the ground, sometimes under the cover of a furze-bush or among tall heather, at others on the bare hill-side. The nest is built of sticks and sedges, being more lightly constructed if placed in the latter situation than in others, when it is often composed of a mass of dead herbage. From four to six eggs are laid, bluish-white in colour, and occasionally, but not always, marked with rust-coloured freckles.

The Hen-Harrier feeds on mice and other small mammals, reptiles, birds and their eggs, on which it pounces unexpectedly, and, unlike the Marsh-Harrier, does not hesitate to chase and strike down birds as large as the Red Grouse. When seeking its prey it shows a wonderful command of flight, quartering the ground with great exactness as it flies with measured beats of the wings close to the ground,



HEN-HARRIER

hovering as something catches its eye, or sailing gracefully over a hedge.

MacGillivray, who well knew this bird, has given a good description of its habits.

The female, known as the Ring-tail, is much larger than her mate.

Length of male, 19 inches; wing, $13\frac{1}{2}$ inches. Female, 21 inches; her wing, 14 inches.

MONTAGU'S HARRIER

Circus cineraceus (Montagu)

PLATE 75

Colonel Montagu, from whom this species takes its name, was the first to distinguish it from the Hen-Harrier, having published an account of his discovery in his *Ornithological Dictionary* in 1802. It is a migratory bird, visiting the fenny districts of the eastern counties of England every summer and breeding regularly there and often, when left undisturbed, in many other parts, including Hampshire, Dorset, Devonshire and elsewhere. It is only a rare visitant to Scotland and Ireland, about seven having occurred in the former and about a dozen in the latter country.

This species is plentiful in suitable localities over a great part of Europe, North-west Africa, and Asia, and spends the winter in Africa and India.

It makes a slight nest of rushes or dry grasses among furze or heather in open places, or of sedges in the fens, and lays four or five eggs of a very pale bluish-green, occasionally marked with some rust-coloured spots.

Henning Weis observed (*Life of the Harrier in Denmark*) that the males arrived shortly before the females and the birds are sociable in their habits.

This species much resembles the Hen-Harrier, but is slightly smaller and more slender in shape, with the wings longer in proportion, and therefore showing more buoyancy in flight. Howard Saunders has pointed out in his *Manual of British Birds* that Montagu's Harrier "may infallibly be recognised by the outer web of its 5th primary having no emargination."

It lives principally on frogs, lizards, and other reptiles,



MONTAGU'S HARRIER (*male and female*)

as well as on eggs, small mammals and birds. When brooding and even before that takes place, the female is supplied with food by her mate.

A very dark brown or black form of this Harrier often occurs, which in a live specimen belonging to the late Lord Lilford, had the eyes as dark, if not darker than a Falcon's, instead of the usual yellow colour.

Length of male, 18 inches ; wing, 14 inches. The female rather larger.

THE COMMON BUZZARD

Buteo vulgaris, Leach

PLATE 76

The days when the Buzzard was common in the wooded districts of England have long since passed, though it is still a resident in some of the wild and hilly parts, including Devonshire, the Lake Country, and occasionally the New Forest. It is fairly common as a nesting species in Wales, central, western, and northern Scotland, as well as the Inner Hebrides, where its plaintive, wailing cry may yet be heard. In Ireland, where it formerly bred, the Buzzard is now only seen as an autumnal and spring migrant.

On the Continent of Europe, it ranges as far eastwards as Poland and southwards to Spain, while in winter many birds migrate to Africa.

In hilly districts its home is usually on a ledge of a heathery or bush-covered cliff, scattered here and there with birch or rowan, but in wooded country the nest, which is large and built of sticks and heather with a lining of dead grasses and occasionally wool, is placed in the fork of a tree.

After the nest is completed, small branches of trees with their green foliage are generally added to the lining. The nest usually contains three or four eggs, in ground-colour dull white, spotted and streaked with rich reddish-brown, and showing pale lilac shell-markings.

The Buzzard when beating the country-side for food, flies not far from the ground, and pounces on its prey, which consists chiefly of small mammals such as field-mice, moles, and young rabbits, reptiles—including snakes, lizards, and frogs—and also insects and earthworms. It does little harm to game. Although active enough when in search of



COMMON BUZZARD

food, the Buzzard appears sluggish in its habits at other times, and may often be seen sitting for a long time on the branch of a tree or on some rock from which it can command a wide view. At times when flying it will ascend to a great height, moving gracefully in wide circles with broad expanded wings and widely spread tail, when it may easily be mistaken for the Golden Eagle, although it can always be distinguished, if near enough, by the white patches under the wings.

The Common Buzzard shows great variation in colour among different individuals, some being more or less a uniform dark brown with a beautiful plum-coloured gloss, and others much marked with white on the breast and other parts.

Length of male, 21 inches ; wing, $14\frac{1}{2}$ inches.

THE ROUGH-LEGGED BUZZARD

Buteo lagopus (J. F. Gmelin)

PLATE 77

This species, easily known when compared with the Common Buzzard by its feathered tarsus, and in the adult bird by the creamy-white on the head and lighter tail, is a more or less regular autumnal and winter visitor to Great Britain, mostly to the eastern parts, where numbers of birds, mostly immature, have sometimes been observed. It has never been known to breed in the British Islands, the accounts of it having done so being unreliable, but it nests in Northern Europe and Asia, whence it wanders southwards in autumn.

The nest, placed in a tree or on a ledge of rock, is built of sticks and twigs and lined with dead grasses, with some green foliage and lichen added. It contains from three to five eggs, which though subject to some variation in colour, are similar to the Common Buzzard's.

In our country the Rough-legged Buzzard likes open country, especially warrens and wastes overrun with rabbits, on which it preys, as well as on mice, reptiles, wildfowl, and other birds.

During the breeding season it utters a plaintive wailing note, likened to the mewing of a cat. Like the other species, the bird has the habit of soaring at a great height.

Length of male, 23 inches; wing, $17\frac{1}{2}$ inches. Female, 26 inches; wing, $18\frac{1}{2}$ inches.



ROUGH-LEGGED BUZZARD

THE SPOTTED EAGLE

Aquila maculata (J. F. Gmelin)

About ten examples of this Eagle have occurred in England, three of these having been shot in Suffolk and Essex in the autumn of 1891 and one in Hereford in November 1915, while two others were obtained in Ireland.

Naturalists have distinguished two distinct races of this species, one considerably larger than the other, and the two forms have a wide distribution over Europe, North Africa, Western Asia, China, and India.

The Spotted Eagle builds its nest, which is large and very flat, high up on big trees, and generally lays two eggs, in colour dull white, streaked and spotted with brownish-red.

It appears to live chiefly on small mammals, water-birds, and reptiles. The birds which have reached our coasts seem to have belonged chiefly to the larger race, and most if not all of them were immature birds.

The three specimens obtained in Essex and Suffolk, all of which I had opportunities of examining, were probably about the same age, and differed in colour. The first captured alive near Colchester was of a very dark brownish-black in colour and glossed with purple, the scapulars and wings marked with large yellowish-white spots. The other two birds shot a little later were very much lighter and browner in colour and still more boldly spotted with white. When fully adult the upper and under parts are of a more uniform brown with only a few small spots on the lesser coverts of the wing.

Length of male, about $26\frac{1}{2}$ inches ; wing, $20\frac{1}{2}$ inches.

THE GOLDEN EAGLE

Aquila chrysaëtus (Linnæus)

PLATE 78

This grand bird, although now confined as a resident to the wildest parts of the Highlands of Scotland, yet at one time had its eyrie in England. Willoughby described a nest found in the Peak of Derbyshire in 1668, and also records that in his time it bred on the Snowdon Hills. It lingered much later in the Lake District and on the Borders, where, Bewick states, it formerly bred on the steepest part of Cheviot, while over the border in Scotland, eyries are said to have been occupied "for some years after 1850 in Ayrshire and Kirkcudbrightshire" (Howard Saunders' *Manual*, 2nd ed.). Though formerly resident in Ireland, it is now said to be extinct there, but I have been told by a competent authority of one being seen near Killarney within the last year or two.

The Golden Eagle inhabits Europe, where it is found in mountainous districts, as well as in North Africa, Asia, and America; and various races, showing difference in size and colour, have been distinguished. Very early in the year the royal birds prepare their nest, usually returning to one occupied in previous seasons, which is placed on a ledge in the steep and rocky face of a precipice or inaccessible crag in some wild corrie among the hills. The site is chosen so that the projecting rock shelters the eggs and young from the weather. Occasionally the nest is so placed that it is not difficult to reach it from below, and I have seen one only about twenty feet above a broken, grassy slope, while others, again, are placed in trees. Outwardly the eyrie is constructed of sticks, forming a rough platform, on which are



GOLDEN EAGLE

put pieces of heather and other material, and in the centre is a cup-shaped depression, small in proportion to the rest of the nest, which is lined with the flattened blades of the wood-rush (*Luzula sylvatica*), a common plant on the Scottish mountains. The eggs are laid early in April, and are usually two, though three may occasionally be found. They vary considerably in colour and markings, even in the same nest, and may be dull white, with either a grey or buffish tinge and mottled with shades of reddish or purple-brown, while others, again, are sometimes pure white. The young, clothed at first in white down, are carefully fed and tended by the parent birds, who remove the feathers or fur from the game and dismember it before presenting it to the nestlings.

The Golden Eagle preys chiefly on the Mountain Hare, but Grouse and Ptarmigan are also taken, as well as lambs, and Red-deer calves. It will also feast on dead sheep or stags which have been left out on the hill. I have had many opportunities of watching this fine bird, when sketching in lonely places among the deer-forests; they may sometimes be seen in pairs, but more often alone, beating the slopes of the mountains at some height from the ground, and ready at any moment to swoop down on some helpless victim who may be attempting to escape observation by crouching among the rocks and heather. Often the Eagle's approach may be known before he comes in sight, by the appearance of terrified packs of Grouse or Ptarmigan who fly before him at their utmost speed.

One can form no idea of the lightness and buoyancy of the Eagle's flight until the bird has been seen at freedom in his own domain, and it is an inspiring sight to watch him on a bright sunny day soaring in wide circles as he ascends to a great height, his broad motionless wings outstretched to their full extent, and with an upward curve at their ends, supporting him without effort. While the bird is aloft, the curious notched pinion feathers may be clearly seen, separated like the fingers of a hand.

Like Hawks, the Golden Eagle is sometimes chased and

annoyed by lesser birds, such as Curlews and Rooks, but on the other hand, is often very bold, attacking and attempting to drive over precipices unwary calves of the Red-deer, which may be surprised in difficult places. It has also been known to attack the Wild Cat.

The Golden Eagle may always be distinguished from the White-tailed or Sea-Eagle by having the legs feathered down to the yellow toes, while the latter bird has the lower half of the tarsus bare.

There is also a difference in the structure of their feet ; these in the Golden Eagle are covered with a network of little plates as far as the last joint, on which there are four or sometimes three broad scales. On the other hand, the White-tailed Eagle has broad scales along nearly the whole upper part of the toes.

Length of male, about 33 inches ; wing, 24 inches. The female is considerably larger : length, 37 inches ; wing, $26\frac{1}{2}$ inches.



WHITE-TAILED EAGLE

THE WHITE-TAILED EAGLE

Haliaëtus albicilla (Linnæus)

PLATE 79

The White-tailed or Sea-Eagle, once numerous in the Highlands and northern parts of Scotland, as well as in Ireland, and known in former days to nest in England, has now apparently entirely disappeared as a resident species. Until 1908 a pair nested in the Shetlands when the male bird was last seen; the female returned annually to the eyrie for another ten years and then disappeared.

During autumn and winter migrant birds, usually immature, visit us occasionally from abroad, and these are often mistaken for Golden Eagles. This species has a wide range over Northern Europe and Asia, and nests as far south as Albania. In the British Isles, the eyrie was generally built on a high cliff overlooking the sea or inland on a rocky ledge. On the Continent of Europe it is often placed in a tree, or even on the ground. The materials of the nest are similar to those used by the Golden Eagle, and the two eggs, pure white in colour, are laid in March or April. In character it is less bold and much more sluggish in its habits than the last mentioned bird, and feeds largely on fish and carrion along the shore, where its loud yelping cry could be heard in former days. MacGillivray says that this is so shrill, that in calm weather one may hear it at the distance of a mile.

Rabbits are also a favourite food, and shepherds used to suffer from its depredations in lambing time.

The sexes are alike in colour, and old birds often become very pale in the tints of their plumage. The young differ from the adult in having a dark tail and the head and body are in general a deeper brown.

Length of male, 36 inches; wing, 24 inches. Female, 40 inches; wing, 27½ inches.

THE GOSHAWK

Astur palumbarius (Linnæus)

PLATE 80

This forest-loving species is now only a rare visitant to Great Britain, a few, for the most part immature birds, occasionally reaching this country, generally in the eastern parts.

Colonel Thornton, in his *Northern Tour* published in 1804, states that he had seen nests and obtained a nestling from the old pine forests of Rothiemurchus and Glenmore, showing that the Goshawk bred a little previous to that date in the Spey district in Scotland.

In Europe, it frequents wooded country from Lapland and Russia southwards to the Mediterranean, and eastwards to the Caspian Sea.

The nest is built by the bird itself, high up in some tree on the edge of the forest, and is composed of sticks and twigs, and often occupied by the same birds for many successive years, and as material is added year by year, it frequently attains a great size. The four eggs are very pale bluish-green, occasionally showing spots of reddish-brown.

The Goshawk, which resembles its diminutive relative the Sparrow-Hawk in many ways, is bold and predatory, and has a fine wild expression in its eye. It preys on Squirrels, Hares, Rabbits, as well as on game birds and other fowl, and is much esteemed by falconers when trained, being well adapted for hawking in enclosed country. Though the male is superior to the female in speed, he is much inferior in size and strength, but both have great courage and show an almost incredible lust for killing.



GOSHAWK

Length of male, 20 inches ; wing, 12 inches. Female, length, 23 inches ; wing, 14 inches.

The plate represents the female.

The immature Goshawk is brown on the upper parts and reddish-buff below, the under parts streaked with drop-shaped markings. The eye is pearly-white.

THE AMERICAN GOSHAWK

Astur atricapillus (Wilson)

An example of this species was obtained near Strabane, Co. Tyrone, Ireland, on February 24, 1919, while three other records of the bird in Scotland and in Ireland have not been accepted as satisfactory.

It breeds in Canada and North America, migrating southwards in winter. According to MacGillivray it differs from the European Goshawk in having "the transverse markings on the lower parts more numerous and more undulated, and the head and check-bands deep black," the tail and wing feathers are also of a more slaty-grey.

It is larger than our bird.



SPARROW-HAWK (*adult male*)

THE SPARROW-HAWK

Accipiter nisus (Linnæus)

PLATE 81

In spite of incessant persecution the Sparrow-Hawk still holds its own in districts where there are large tracts of woodland, especially in those where game is not strictly preserved. Except in the extreme north, it breeds throughout Europe, though sparingly in Spain and Italy, while in Asia it ranges as far east as Japan and southwards to the Himalayas.

Mr. R. J. Howard has provided me with the following account of the habits of this species : “ It usually builds its own nest of twigs broken by itself from the branches. Should the first clutch of eggs be robbed the bird will then probably take possession of a nest of some other bird, and in it lay her second clutch. The eggs, from four to six, sometimes seven in number, are round in shape, bluish-white, blotched more or less with reddish-brown, and are laid on alternate days.

“ Incubation lasts from thirty to thirty-two days. The difference in size of the young is, I think, sexual, rather than due to age ; for a young female almost covered with down will be about double the weight of her brother who is more advanced in feather.

“ As is the case with almost all birds of prey, the female remains in the neighbourhood of the nest to brood and protect the young, whilst the cock does the hunting. He brings food to a spot within gunshot of the nest, calls to the hen, who flies to him and takes the quarry, already plucked and frequently headless, to the nest, where she breaks it up and feeds the young. Should the hen be killed whilst the young are too small to tear the food for themselves, I think they

would perish from hunger, for although the cock would bring birds to the nest, ready plucked, his instinct would carry him no further. A gamekeeper shot a cock Sparrow-Hawk in the evening, having killed the hen the day before. The young in the nest were surrounded with small birds which had been brought in by the cock. All were more or less plucked, the heads of some having been pulled off. I saw and counted these : one House-Martin, one Wren, several Wagtails, Blue Tits, Chaffinches, etc., twenty-one small birds in all. I have other somewhat similar records, but not with so many small birds collected. . . . The short round wings and the large tail enable the bird to thread its way through thick cover in a wonderfully rapid manner. The long slender legs give it a good reach, and the long flexible toes, armed with claws as sharp as needles and also furnished with elongated, indiarubber-like pads, enable it to secure a grip on the feathered body of its quarry that is seldom relaxed so long as life is left in the poor victim. It takes any bird up to or exceeding its own weight which it can catch : the female can and does kill Woodpigeons."

The female is very much larger than the male and differs in colour. The upper parts are in general brownish-grey with a white patch at the back of the neck ; the under parts are greyish-white crossed with narrow bars of dusky-grey and rufous-brown, the under tail-coverts white. The tail is marked with four dark bars. In old age she often assumes the colour of her mate.

Length of male, 13 inches ; wing, 8 inches. Female, 15½ inches ; wing, 9½ inches.



KITE

THE KITE

Milvus ictinus, Savigny

PLATE 82

In the old days the Kite, often called Glead or Gled from its graceful gliding motion during flight, was everywhere abundant in our country, and seems to have been common in many places till the early part of last century. Now it is only known as a resident in certain parts of Wales where some twenty or more birds are said to breed. It also nested in Devonshire in 1913. Elsewhere in Great Britain it is now only an uncommon visitant, and does not appear to occur in Ireland, but it has a wide range over Europe, as well as North Africa and Asia.

The nest is generally built high up in the fork of a tall tree, and is composed of sticks and various odd pieces of rubbish, waste paper, and rags. The eggs, usually three in number, are dull white, with blotches and streaks of rust-colour.

The Kite will eat anything in the way of food which comes easily to hand, including offal of all kinds, reptiles, small mammals, and birds. Formerly when it was abundant, it made sad havoc among the young chickens in the poultry yard, and to prevent its depredations on the Scottish crofts, where the rents were paid with pullets, children were generally posted on the watch to "sheu the Glead." On the wing the Kite is a most graceful bird, often sailing in wide circles and guiding its flight by its long forked tail. It was much prized for sport in the old days of falconry, being looked upon as the special quarry of kings, and hence the epithet "royal" was applied to the bird.

It has a plaintive mewling note.

The male is rather brighter in colour than the female, and a little less in size.

Length of male, 25 inches ; wing, 19 inches.

THE BLACK KITE

Milvus migrans (Boddaert)

This migratory species, smaller and duller in colour than our Kite, though by no means black, may easily be known by its shorter and less forked tail ; it has twice occurred in Great Britain, the first example at Alnwick, Northumberland, in May 1866, and the other near Aberdeen in April 1901. It breeds chiefly in Central and Southern Europe, as well as in Asia and North Africa. Lord Lilford says, in his work on British Birds, "the present species generally nests in pine-trees, poplars, or willows, at a considerable height from the ground : several pairs are often to be found breeding in close vicinity."

The two eggs resemble those of the Red Kite, and both birds live on much the same kind of food, although the Black Kite is more partial to fish.

The adult has the forehead and throat dull white, the nape tinged with rufous, streaked with brownish-black : the upper parts are dark brown, lightened on the wing-coverts by paler edges to the feathers. The under parts are rufous-brown with dark streaks, the tail barred with dark brown.

Feet and cere yellow, irides pale greyish-yellow.

Length, 25 inches ; wing, 20 inches.





THE HONEY-BUZZARD

Pernis apivorus (Linnæus)

PLATE 83

The Honey-Buzzard is a migratory species which at one time seems to have been a regular summer visitor to England, though it apparently was never plentiful. Their nests have been recorded in wooded districts as far north as east Ross-shire and Aberdeenshire, while between sixty and seventy years ago it bred annually in the New Forest and would doubtless do so still if not constantly persecuted and destroyed. It is a well-known bird in most parts of Europe during summer, from Norway, Sweden, and Russia to northern Spain and Italy, ranging eastwards to Western Siberia, and wintering in Africa and Madagascar. When passing to and fro between Europe and Africa, the birds have been described as flying in large flocks, which pass continuously for several days.

The Honey-Buzzard chooses for its home a tall beech or oak, and builds its nest—often placed on the foundations of an older one of some other species—of sticks, lined with beech twigs and fresh green leaves of the same tree.

The late E. C. Newcome, as quoted in the fourth edition of "Yarrell," observed that in France the young when in the nest were sheltered by a bower of leafy boughs, a fact which has not been noticed in our country. The two or three eggs are buffish-white in ground colour, blotched or thickly clouded with various shades of rich brownish-red.

The Honey-Buzzard is an entirely harmless bird, its principal food consisting of the grubs of wasps and wild bees, obtained by digging out the combs with its powerful feet and long claws, which enable it to excavate deep into

the ground ; worms, caterpillars, frogs, lizards, and mice are also eaten. It is very nimble and can run with great speed on the ground, which peculiarity was noticed long ago by Willoughby.

In the *Victoria History of the County of Sussex* Mr. J. G. Millais has given an interesting account of a tame Honey-Buzzard, which would perch on his hand, whence it would sweep after and capture passing bees or wasps, following the latter insects to their nest in order to dig out the comb. It appeared to be quite indifferent to the attacks of the insects, which were unable to penetrate with their stings the armour of its feathers.

The Honey-Buzzard is subject to a great variety of colouring, which is more evident in immature specimens. The usual form is like the bird shown in the plate. A beautiful variety—a young bird—lived for some time in the Lilford aviaries. This had the head and underparts white, with dark streaks and markings, and lived on a diet of bread and milk.

It frequently uttered a peevish wailing cry.

Length of male, about 22 inches ; wing, 17 inches.



GREENLAND FALCON

THE GREENLAND FALCON

Falco candicans, J. F. Gmelin

PLATE 84

This truly noble bird, one of the three large northern Falcons belonging to the group formerly known as “Jer,” or “Gyr,” is, as its name implies, a native of northern Greenland, breeding also within the Arctic Circle in North America.

The late John Hancock was the first to point out that it may be distinguished at all ages from the Iceland and Gyr-Falcon by the spots and markings telling dark against the light ground colour of white ; whereas in both the other forms the plan of colouring is reversed, these having a dark ground relieved with spots and markings of white or grey. Owing to the hunting grounds of the Greenland Falcon in the far north being frozen up in the winter months, and thus cutting short its food supply, which consists chiefly of ducks and other migratory wild-fowl, a good many birds move southwards during the cold season, and thus it more often visits our islands, especially Scotland and Ireland, than the other two species, which live in a less severe climate.

The nest is placed on the rocky ledge of a cliff, sometimes in the former home of some other species, and usually contains four eggs, in ground colour reddish-orange, spotted over with reddish-brown or brick-red.

The Greenland Falcon is by far the finest and most beautiful of our Hawks, with its full dark eye and snowy plumage, and was in great repute in the days of falconry, when it was flown at the larger kinds of quarry, such as Cranes and Herons, but its place has now been taken by the Peregrine for purposes of sport. In olden times so

great a value was set on this bird, that it was looked upon as a gift for kings. Falconers skilled in trapping Hawks were sent to Norway and Iceland to obtain them, and the white birds seem always to have been prized more than the grey. The young bird has broad brownish markings above, and tear-shaped spots below, and the tail is barred with dusky brown.

Length of male, 21 inches ; wing, $14\frac{1}{2}$ inches. Female, 23 inches ; wing, 16 inches.



ICELAND FALCON

GYR FALCON

THE ICELAND FALCON

Falco islandus, J. F. Gmelin

PLATE 85

This species occasionally visits the British Islands in winter, though less frequently than the Greenland Falcon, and like the other northern Falcons, shows considerable variation in colour in different individuals. In all these Falcons, however, when once they have attained their mature plumage, no alteration takes place in the type of markings or colour, a dark bird always remaining dark, while a light one keeps the same phase of colouring during its lifetime.

This Falcon is a native of Iceland and southern Greenland, the race inhabiting the latter country, known as *F. holboelli*, being whiter than the true Iceland, and is apparently intermediate between it and *F. candicans*.

In Iceland this species lays its eggs, which are similar to the Greenlander's, on ledges of cliffs, or in the unoccupied nest of a Raven or other bird. It often chooses inland situations, on precipices overhanging fresh-water lakes, where it obtains an abundant supply of water-fowl and other birds. It was, like the species just described, much sought after in ancient times by falconers, but not prized so much as the more northern bird.

The young have the general plumage of the upper parts dark brown, with brownish-yellow edgings to the feathers, and the lower parts broadly marked with longitudinal bands of dark brown on a lighter ground. The measurements are the same as those of the Greenland Falcon.

THE GYR-FALCON

Falco gyrfalco, Linnæus

PLATE 85

Only three specimens of the true Gyr-Falcon have occurred in England, the first, an adult bird, having been shot at Mayfield, Sussex, in January 1845, an immature example at Orford, Suffolk, October 1867, and the last in Essex in December 1901. Another doubtful example is said to have been obtained in Norfolk in 1883. Inhabiting more southern regions than either of the other two northern Falcons, it appears to have less inducement to wander in winter from its usual haunts in Norway, Sweden, Lapland, and northern Russia, though it is said also to occur in Greenland and Arctic America.

The adult birds may be distinguished from those of the Iceland Falcon by their darker colouring, especially on the head, by the dark moustacial patch, and also by their slightly smaller size. The immature birds of these two forms are practically the same in colour, as are likewise the eggs.

It breeds on cliffs like its congeners, and preys chiefly on wild-fowl and Ptarmigan.

Length of male, $19\frac{1}{2}$ inches ; wing, 14 inches. Female, 22 inches ; wing, 15 inches.



Falco peregrinus

THE PEREGRINE FALCON

Falco peregrinus, Tunstall

PLATE 86

The Peregrine Falcon still retains its old eyries in many parts of our islands, and though by no means common, is perhaps more numerous than any of our other large birds of prey, and in relation to its size is without doubt the most daring and fearless of them all. In ancient times, when, as now, its high courage, hardy constitution, and docility were greatly valued by falconers, its breeding-places were much more numerous and strictly guarded. During autumn a good many Peregrines, mostly birds of the year, known as "Passage Hawks," reach our country from abroad, usually following the hosts of migratory ducks from more northerly regions, and many of them take possession of a hunting ground and stay for the winter. As a resident or migrant the Peregrine is well known all over Europe from Scandinavia to the Mediterranean, where in the latter region there resides a smaller form known as *F. punicus*; and admitting various sub-species, it may be said to have a world-wide distribution.

The eyrie, often the former home of some other bird, is usually situated on some steep rocky cliff, either overhanging the sea or inland, while it is occasionally placed in trees. The same site—for the nest is merely a hollow scratched out on the earth-covered shelf, and surrounded by bones and castings—is often occupied for many successive years, even in some cases used by succeeding generations of Falcons for centuries; and if at any time one of the pair be destroyed, the survivor seems to have no difficulty in quickly obtaining another mate. The eggs are usually

three or four in number, and vary in colour, some closely freckled with rich orange-brown, others with deep brick-red.

In hawking language the female is always known as the Falcon; the male, from his smaller size—considered as one-third less—being called the “Tercel” or “Tiercel.” At the present time this noble form of sport, far from being extinct, is still carried on where the open nature of the ground allows it to be practised with success.

The food of the Peregrine consists chiefly of water-fowl—including on occasions birds as large as wild Geese—Pigeons, Grouse, and other species, struck down while in full flight by a lightning stoop from above, the Falcon always striving to get above its quarry in order to deliver the fatal stroke by the hind claw: the velocity of this downward rush is almost incredible, and even during a stern “chase” the speed is extraordinary. I have seen one in full career after a small flock of Golden Plover, and never remember observing any birds fly so fast. From constant practice of their powers, wild Peregrines are able, by skill and wing power, to capture the Peewit, which often baffles any but the best trained Hawks by its rapid turns and shifts. When the Falcon takes to soaring, it can rise to an immense height, and frequently passes out of sight. This fine bird is ruthlessly and needlessly persecuted and done to death by many game preservers.

The late Lord Lilford, while stating that the Peregrine does and can take Partridges and Grouse when she gets a fair chance and is hungry, adds, “but it must be remembered that as a rule she captures her ‘quarry’ in the air, and that our common game-birds just mentioned are of terrestrial habits and certainly by no means willing to take wing when a Falcon is in sight, but do their utmost to squat close and conceal themselves, so that they are by no means the habitual or even (in my opinion) a particularly favourite prey of the Peregrine.”

Length of male, 15 inches; wing, $12\frac{1}{2}$ inches. Female, 18 inches; wing, 14 inches.

Two examples of the American Peregrine or Duck-Hawk, *Falco anatum*, have occurred in England, the first shot by

Mr. J. Whitaker, on 31st October, 1891, at Newbold Verdon, near Market Bosworth, Leicestershire, and now in his possession, and the other netted on the Lincolnshire coast, 28th September, 1910, and recorded by Mr. G. H. Caton Haigh.

This race is in general larger and darker than our bird, and according to Elliot Cowes (*Key to North American Birds*), it varies a good deal in size and colour. It inhabits the greater part of North America.

THE HOBBY

Falco subbuteo, Linnæus

PLATE 87

This beautiful little Falcon generally arrives in England about the middle of May, and though by no means common, breeds more or less regularly in the southern and south-eastern counties, being less frequently met with farther north. It is also widely distributed over Europe and North Africa, across Asia to Kamchatka, while in winter it occurs in China and India.

The Hobby is often described as being like a miniature Peregrine, but the wings are proportionally longer, and the dark markings on the underparts are longitudinal in the adult Hobby, whereas in a Peregrine of the same age they form transverse bars.

It breeds late in the season, the female usually laying her three eggs in June. These are deposited in the unoccupied nests of Crows, Magpies, or other birds, and resemble the eggs of the Kestrel, though not so bright a red nor so boldly spotted.

Although it sometimes kills small birds, and can even with its wonderful wing-power outmanœuvre and capture the Swift, the Hobby is largely insectivorous, feeding on dragon-flies, beetles, grasshoppers and other insects. Lord Lilford says (*Birds of Northamptonshire and Neighbourhood*): "In pursuit of its prey the rapidity of the Hobby is marvellous, and the manner in which it turns and mounts after making a stoop is quite unrivalled by any bird of prey with which I am acquainted."

The Hobby, however, when trained for purposes of sport, in spite of all its fine powers of flight, is not a success, for



HOBBY (*male and female*)

although it "waits on" beautifully, flies well to the lure, and is very docile, it is a poor "footer."

The cry is very like the Kestrel's, and also resembles the Wryneck's. The bird leaves us in September.

Length of male, 12 inches; wing, 10 inches. Female, 14 inches; wing, $11\frac{1}{4}$ inches.

THE MERLIN

Falco æsalon, Tunstall

PLATE 88

This little Falcon, the smallest of its kind inhabiting the British Islands, breeds more or less regularly on the moors of northern England, in Wales, Scotland, and Ireland ; while their numbers are increased in autumn by the arrival of others from the Continent of Europe, over which it has a wide range, especially in the northern and central portions, as well as in Central Asia. In winter it visits North Africa, Northern India, and China.

The nest, if such it can be called, consists of a few twigs of ling arranged round a hollow scooped out in the ground, either among heath on the open moor or on a heathery brae by the side of a burn, while at times the eggs are laid on a rocky ledge or in the deserted home of a Crow or some other bird in a tree. They are generally four in number, and of a rich red-brown or purplish-red colour.

The Merlin, for its size, is one of the boldest of our Hawks, and will attack birds on occasion twice its own weight, but its chief food consists of the smaller species, such as Meadow-Pipits, Larks, Snow-Buntings, Thrushes, Snipe, and other waders.

About the month of October the Merlins leave their moorland haunts, some moving southwards, others merely descending to the coast, where they linger till the spring. When hunting they strive to take their quarry by surprise, sweeping along by the side of a bank or concealed in their approach by a fold in the ground, but though less swift than the Hobby, the Merlin can usually outfly and overhaul without difficulty the smaller birds on which it preys. It



MERLIN

seldom perches on trees, stones and rocks being its favourite resting-places ; hence it is sometimes called the Stone-Falcon. The Merlin is docile and easily tamed, but in confinement is delicate and seldom lives beyond the first moult. It was, and still is, much esteemed by falconers as a trained Hawk, and can be flown with success at Larks and even larger quarry.

The females, like so many birds of prey, are larger than the males and occasionally, when old, assume more or less the colours of the other sex.

Length of male, 11 inches ; wing, 8 inches. Female, $12\frac{1}{2}$ inches ; wing, $9\frac{1}{4}$ inches.

THE RED-FOOTED FALCON

Falco vespertinus, Linnæus

PLATE 89

The Red-footed Falcon, closely related to the Kestrel, though resembling in build the Hobby, is a rare and irregular visitor to the British Islands, some forty examples having occurred therein. During summer it inhabits Eastern Europe and Western Asia, migrating in winter as far south as Central Africa. It is sociable in its habits, arriving at its breeding grounds in flocks, and a number of nests are often occupied by pairs in the same tree.

The nests are not built by the birds themselves, but are the deserted homes of Rooks, Magpies, or Crows. The eggs, varying in number from four to six, are reddish-yellow, spotted and marked with reddish-brown.

It is perhaps more insectivorous than any of our Hawks, capturing much of its prey on the wing, though it will take grasshoppers, beetles and other insects on the ground, over which it can run with a nimbleness unusual in birds of prey.

It is said to be fond of marshy ground, sparsely scattered with timber, and its cry resembles the Hobby's.

The female differs considerably from the male shown in the plate. The head and nape are creamy-buff or chestnut, with a black patch round the eye. The upper parts are chiefly slaty-grey with darker bars, the under parts chestnut.

Length of male, $11\frac{1}{2}$ inches ; wing, $9\frac{3}{4}$ inches. Female, 12 inches ; wing, 10 inches.



RED-FOOTED FALCON

KESTREL (*male and female*)

THE KESTREL

Falco tinnunculus, Linnæus

PLATE 89

The Kestrel, by far the most numerous of our predatory birds, though resident in many parts of the British Islands, moves southwards in winter from its more northern quarters, and about the same time numbers also reach England from the Continent of Europe, where it has a wide range, while it is also found in Africa and Asia.

The Kestrel either takes possession of the deserted nest of a Crow or Magpie, or lays its eggs in a recess in the rocky face of a cliff, or in a hole in the wall of a ruined building, and occasionally in a hollow tree. The four, five, or six eggs are closely dappled with various shades of rich reddish-brown, often on a creamy-white ground.

The Kestrel—or Windhover as it is often called, from its method of apparently hanging in the air—hovers head to wind, either motionless or supporting itself with rapid beats of the wings, gliding quickly to another point as soon as it is satisfied that there is no mouse nor other prey beneath, and repeating the operation until it finds some unsuspecting quarry on which it drops.

It is one of the least harmful and most useful of our raptorial birds, killing large numbers of mice and voles, as well as beetles and other insects, and although there is no denying that it will occasionally take small birds, its short toes are ill adapted to the capture of feathered prey.

The well-known cry has been syllabled as *Klee, Klee, Klee*.

Very old female birds partially assume the male plumage and have more or less some bluish-grey on the rump and tail.

There is little difference in the size of the two sexes.

Length of male, 14 inches ; wing, 9½ inches.

THE LESSER KESTREL

Falco cenchris, Naumann

The visits of this small Falcon to the British Islands are few and far between, the number recorded in England being about nine, and one each in Scotland and in Ireland. It breeds in Southern Europe, from Spain, where it is extremely abundant, eastwards through Western Asia to Bokhara and Persia, and also in North Africa, migrating in winter to tropical and South Africa.

The Lesser Kestrel, which is sociable in its habits, makes no nest; its eggs, usually four or five in number, and paler in colour than the Common Kestrel's, are placed in holes in rocks, buildings, or ruins. The bird is insectivorous.

In colour it much resembles its larger relation, but has no dark spots and markings on the back, and the inner secondaries and most of the greater coverts are bluish-grey. Another distinguishing mark is the colour of the claws, which are white. Except for the last mentioned distinction, the female is practically the same as that of the Common Kestrel.

Length of male, 12 inches; wing, $9\frac{1}{8}$ inches.



THE OSPREY

Pandion haliaëtus (Linnæus)

PLATE 90

The Osprey, at one time a regular visitant during the summer months to many a Highland loch, returning year after year to the same eyrie, has long ago deserted its two last well-known strongholds, viz. Loch an Eilan in 1903, and Loch Arkaig in 1911. It is extremely unlikely that it may still nest elsewhere in Scotland, and without doubt the destruction of this fine bird as a breeding species was caused partly by the greed of egg collectors, and also by the wanton shooting of both old and young birds during their migration, and of the former when they returned in spring. Migrating Ospreys still occur, however, during those seasons in the British Islands, including Ireland, though they have never been known to breed there. Elsewhere this species has a world-wide distribution, but has not been recorded in Iceland nor Greenland.

The nest is a large piled-up structure, built of sticks and turf, on the flattened top of which is formed a small moss-lined cavity to receive the eggs. These are generally three in number, and vary a good deal in colour, the usual type being white or buffish-white in ground colour, marked with spots and blotches of deep reddish-brown, sometimes with underlying shell-markings of violet-grey.

In Scotland the site selected in most cases was the top of some ruined building on the side of or surrounded by the waters of a fresh-water loch, on the summit of a steep conical island rock, or the upper branches of a tall old pine.

The background in the plate was taken from one of the old nesting resorts of the Osprey, Loch an Laigaird, near

Scourie, Sutherland, where the birds were exterminated during the first half of the nineteenth century.

A large extent of water, well stocked with fish ; solitude and freedom from molestation, seem essential to the Osprey, which captures its prey by a sudden plunge into the water, after hovering Kestrel-like at some height above the surface, and should the fish be within easy reach, it wets little more than its feet in the process. These are wonderfully adapted to the purpose of securing the slippery quarry, being armed with long curved claws, while the under-surface of the toes, the outer one of which is reversible, are rough and studded with pointed scales. The legs are strong and muscular, the thighs, unlike those of most raptorial birds, being clothed with short close feathers to withstand the wet.

The female is larger than the male and is more marked with brown on the breast.

Length, 24 inches ; wing, 20 inches. Female, 26 inches ; wing, 21 inches.



CORMORANT and Shag (immature)

SHAG

ORDER STEGANOPODES

FAMILY PELECANIDÆ

THE COMMON CORMORANT

Phalacrocorax carbo (Linnæus)

PLATE 91

This bird is plentiful about our rocky coasts, being more common on the north-eastern shores of England and east coast of Scotland than the Shag or Green Cormorant, though the latter predominates in many parts of the west. The Common Cormorant is also widely distributed over Europe, Asia, and America, and even reaches Greenland. The birds usually nest in colonies on high rocks and cliffs by the sea, or occasionally inland on trees.

The nest is made of sticks, grass, seaweed, and various odds and ends, and contains from three to five eggs, which are coated with a white chalky substance overlying the delicate greenish-blue shell. The blind and naked young, when first hatched, are slaty-black in colour.

The Common Cormorant, often called the Great or Black Cormorant, feeds on fish, caught with great dexterity, of which it requires a large amount to satisfy its ravenous appetite. The birds have a characteristic habit, when gorged and resting after a meal, of basking on some low rock, where they may be seen in groups, some of the party generally spreading their wings to the sun and wind so that they may dry.

The belief held by some naturalists that the bird uses its wings for swimming while under water, is considered by Mr. T. A. Coward, a good authority, as erroneous.

The adult Cormorant in nuptial dress, as shown in the plate, loses the white filaments on the head and neck in early summer as well as the white patch on the thigh. The sexes are alike in colour.

Length, 38 inches ; wing, 14 inches.

THE SHAG, OR GREEN CORMORANT

Phalacrocorax graculus (Linnæus)

PLATE 91

This species, also sometimes called the Crested Cormorant, from the tuft of recurved feathers on the crown, worn during the breeding season only, is common in rocky places on our western coasts and islands, and along the western shores of Europe from Norway to Spain and Portugal. It breeds on ledges of rock and among large boulders, and often chooses a site within a dark and sea-washed cavern.

The nest is made of bits of turf, seaweed, and other materials, which soon become an evil-smelling mass. The three or four eggs are similar in colour and texture to the Common Cormorant's, and the young likewise are without down when hatched.

The habits of the Shag, and its manner of catching fish by diving, are like those of the larger bird ; and both utter a croaking note. The Shag, however, differs from the Cormorant in having only twelve feathers in the tail, the other having fourteen.

The male and female do not differ in colour.

Length, 29 inches ; wing, $10\frac{3}{4}$ inches.

THE GANNET

Sula bassana (Linnæus)

PLATE 92

The Gannet is found breeding regularly on certain rocks and islands off our coasts, which it leaves as soon as the young are able to fly, while the rest of the year is spent at sea, where it leads a wandering life. In winter it ranges as far south in Europe as the Mediterranean, while to the north its breeding range extends to Iceland, the Faroes, and also to North America.

One of the best known breeding stations in Great Britain is the Bass, off the Haddingtonshire coast; others being Suliskerry, some forty miles west of the Orkneys; Sulis-geir, Outer Hebrides; the St. Kilda Islands; Bressay, Shetlands, since 1915; the Rumbings and Humla Stack, Shetlands, since about 1919; Ailsa Craig, at the entrance to the Firth of Clyde. Off the Welsh coast there is a breeding station at Grassholm, and two others in Irish waters, viz. the Bull Rock, County Cork, and the Skelligs, County Kerry. Up till 1903 Lundy Island was also used as a breeding station.

About the end of March or in April the Gannets, or, as they are sometimes called, Solan Geese, collect at their nesting rocks, and construct their nests of seaweed and grassy material, placing them on a ledge or among boulders. The eggs, like those of the Cormorant, are coated with a chalky substance, under which is the pale bluish-green shell, and number three or four. The young when hatched are blind, naked, and slaty-black in colour, but are soon clothed in thick white down.

The fish on which the Gannet lives are obtained by diving,



GANNET (adult and immature)

and when occupied in this pursuit the birds follow the shoals, flying at a considerable height and plunging down, at first with the wings held partly open, but on nearing the surface they are folded in just before the water is struck, when a jet of spray is thrown upwards. They only remain below for a few seconds, then rise and resume their fishing.

In the plate a bird in the dark speckled plumage of the first year is shown in the background ; this becomes lighter by degrees every season until the bird attains maturity, which, according to Howard Saunders, is in its sixth year.

Length, 36 inches ; wing, 20 inches.

ORDER HERODIONES

FAMILY ARDEIDÆ

THE COMMON HERON

Ardea cinerea (Linnæus)

PLATE 93

The Common Heron is resident and widely distributed in the British Islands, being also found over the greater part of Europe, as well as in Africa, Asia, and Madagascar.

It breeds in colonies, and the nests, composed of sticks, with a lining of finer twigs and roots, are usually placed in tall trees or on cliffs, but are sometimes built on the ground. These heronries, to which the birds return very early in the season, are often used for many years in succession. The three or four eggs are greenish-blue, showing a chalky surface.

The food, for the most part obtained in the evening and at night, consists of various fish, reptiles, and small mammals, including the Water-Vole. The bird is extremely shy and wary in its habits; its usual mode of fishing is to stand immovable in some shallow until its unsuspecting prey comes within reach, when with a sudden stroke of the long bill the fish is caught between the mandibles and swallowed.

The cry is loud and harsh, and may often be heard as the birds fly to their feeding grounds in the evening. When these are on the coast, the birds may be seen at low water treading cautiously among the shallows seeking crabs and small fishes.

Length, about 38 inches; wing, $17\frac{1}{2}$ inches.



COMMON HERON

PURPLE HERON

THE PURPLE HERON

Ardea purpurea, Linnæus

PLATE 93

This handsome species is a rather rare visitor to our islands, though some fifty specimens have been recorded at different times, mostly immature birds. It has more often been taken on the south-eastern coast of England than elsewhere. The Purple Heron is migratory, and frequents during the breeding season those marshy places where there are dense reed-beds in many parts of Central and Southern Europe, nesting regularly as near our shores as Holland and France, as well as in Africa, Asia, and Madagascar. It spends the winter in tropical and southern Africa.

The nest is generally placed in thick reed-clumps, often on the bent down and matted stems just above the water, and is built of the dead stalks of the same plant and of sedges. The three to five eggs are the same in colour and texture as the Common Heron's, but are smaller.

It is very shy and retiring in its habits, seeking the seclusion of dense aquatic vegetation, and feeds chiefly on frogs, eels, and small fishes.

According to Howard Saunders (*Manual of British Birds*), "the note is more guttural than that of its congener."

There is no difference in the colour of the sexes.

Length, 33 inches ; wing, $14\frac{1}{4}$ inches.

THE GREAT WHITE HERON

Ardea alba, Linnæus

PLATE 94

Only some seven examples of this beautiful Heron have been recorded in Great Britain, five of these having been obtained in England and two in Scotland. In Europe it haunts the marshes and waters of the south-eastern countries, and is also found in southern Asia, and in Africa as a migrant.

The nest is placed among reed-thickets or in trees in swampy places, is built of sticks or dead reed-stems, and contains three or four eggs of a greenish-blue tint.

The bird is sociable in its habits and its food is similar to the Common Heron's. According to Lord Lilford, in his work on British Birds, it resembles the latter bird in its general habits, "frequenting the open marshes and the margins of rivers and lakes in quest of food during the day and roosting in high trees."

The males are a little larger and have more fully developed dorsal plumes than the females, and both sexes are wantonly destroyed in great numbers, on account of these decorations, known as "Ospreys" in the millinery trade. Fortunately this evil has now been checked in Great Britain by the new Act prohibiting the importation of plumage.

Length, 35 inches ; wing, 17 inches.



BUFF-BACKED HERON

GREAT WHITE HERON

LITTLE EGRET

THE LITTLE EGRET

Ardea garzetta, Linnæus

PLATE 94

The Little Egret is an extremely rare visitant to the British Islands, apparently the only reliable record being one shot at Countess Weir, on the Exe, Devonshire, on 3rd June, 1870. Some others have been recorded as occurring in Yorkshire, Northamptonshire and Sussex, but doubt has been expressed as to their authenticity. The Little Egret breeds in Southern Europe, as well as in Africa and the warmer parts of Asia ; the European birds mostly wintering in Africa.

It breeds in colonies, and builds its nest, which is lightly built of sticks and reeds, in a bush or tree among the swamps ; the eggs, usually four in number, are pale bluish-green.

The birds are very noisy and clamorous at their breeding stations, the cry being harsh and discordant like that of its congeners, and like them it has also suffered much at the hands of the plume-dealers.

It lives on small fishes, reptiles, and water insects. The sexes are alike in colour.

Length, 21 inches ; wing, $11\frac{1}{4}$ inches.

THE BUFF-BACKED HERON

Ardea bubulcus, Audouin

PLATE 94

A specimen of this Heron was shot in October 1805 near Kingsbridge, Devonshire, and another in Bredon Marshes, Norfolk, in October 1917. It breeds in Southern Spain and also inhabits South-western Asia, Africa, and Madagascar.

The nest is made among dense reed-beds and on bushes in marshy ground, the birds breeding in large colonies and constructing their nests of sticks. The eggs, from three to five in number, are a delicate pale blue in colour.

This Heron's chief food appears to consist of the ticks which infest cattle, and in consequence it may usually be found near the herds, but it also feeds on grasshoppers and other insects. Its notes are harsh like those of other Herons. In the autumn the buff-coloured plumes are moulted, and are not again assumed till the following spring. In the female these are less developed and she is smaller than the male.

Length, $20\frac{1}{2}$ inches ; wing, about 10 inches.

THE SQUACCO HERON

Ardea ralloides, Scopoli

PLATE 95

About seventy examples of this species have been recorded in the British Islands, the greater number of these having occurred in the southern and south-western parts of England, especially in Cornwall and the Scilly Islands. It has only occurred thrice in Scotland, and ten times in Ireland. During summer it breeds in Southern Spain and in Southern Russia eastwards to the Caspian Sea, but is only occasionally seen in Central Europe. In Africa it is resident.

This beautiful little Heron is usually found breeding in colonies, often in company with Night-Herons and Egrets; the nest is rather lightly constructed of twigs and placed on the boughs of trees or in bushes in marshy places or where floods have inundated the country. In North Africa it is said to nest on the ground among reed-jungles. The greenish-blue eggs vary in number from four to six. A large proportion of the food of this species consists of aquatic insects, but frogs, tiny fishes, and even small mammals are also eaten. A captive bird with which I was well acquainted passed a good deal of its time during sunny weather in stalking blue-bottle flies, which it approached in a crouching attitude with great caution, and when within striking distance, with a sudden dart of its bill, seldom failed to secure its prey.

The late Colonel Irby says (*The Ornithology of the Straits of Gibraltar*, 2nd ed., pp. 204-205): "On the Spanish side the Squatto Heron is entirely migratory, arriving during the month of April. They are common in the marisma of the Guadalquivir; but I never observed any near Gibraltar,

nor did I ever see them following cattle, like the preceding species (Buff-backed Heron). They nest late in the season."

This bird is usually silent, spending a good part of its time with its neck drawn closely in after the manner of a Bittern. The late Lord Lilford states that the only note he ever heard from this species was "a harsh rattling croak."

The female resembles the male, but the plumes on the back of the neck are not quite so long.

According to the late H. E. Dresser (*Birds of Europe*), "the fully adult dress is not assumed until the third year."

Length, 20 inches ; wing, 9 inches.



SQUACCO HERON

NIGHT HERON
LITTLE BITTERN

THE NIGHT-HERON

Nycticorax griseus (Linnæus)

PLATE 95

The Night-Heron has been known as a straggler to England since 1782, when it was first recorded, and since that date a good many have been obtained or seen, mostly on the southern and eastern coasts, although a fair number have occurred inland. Several have been noted in different parts of Scotland, one as far north as Aberdeen, and another on the Outer Hebrides ; whilst in Ireland twenty-five have been observed. It is known as a regular spring visitor to Central and Southern Europe, and has been recorded as far north as the Faroes, inhabiting also more or less the whole of Africa and a large part of the temperate and southern regions of Asia. A closely allied form is found in America.

Referring to its breeding habits, Lord Lilford says : "This species commences to nest about the middle of May, sometimes in congregations composed entirely of its own species, but, in my experience, most frequently in company with other members of the Heron family. The nests are slightly but solidly built of twigs and reed-stalks, and usually situated in low-growing bushes in marshy jungles, but occasionally in trees at a considerable height, and now and then among canes and reeds only a few inches above the ground or water. The eggs are generally four in number, and in colour are of the usual greenish-blue that prevails among the Herons." The bird represented in the plate was taken from a sketch of one in the Lilford aviaries, as it stood over its eggs, which were laid on the bare ground, two small twigs being the only material collected for the nest.

The rather melancholy "squak" which represents the Night-Heron's usual note is mostly heard after sunset, as the habits of the bird are entirely nocturnal; during the day it generally seeks the repose of shady willows and other trees, where it passes the time sitting quietly on some bough.

The food consists of various aquatic insects, reptiles, and small fishes, in the capture of which the bird shows great activity.

The long white neck-plumes of the Night-Heron vary considerably in number; according to Lord Lilford there are usually five, while some birds have only two, and as many as ten have been noted. These are shorter in the female, and her colour is also duller. The immature bird has the upper parts brown with lighter stripes and spots, and the pale underparts are streaked with dark.

Length, 23 inches; wing, 12 inches.

THE LITTLE BITTERN

Ardetta minuta (Linnæus)

PLATE 95

Although only an irregular visitor to the British Islands, chiefly during spring and summer, there is good ground for believing that this small species has nested in Norfolk as well as in other parts of England. It is rarer in Scotland, but some thirty occurrences have been noted in Ireland.

The Little Bittern is common in summer among the marshes of Central and Southern Europe and in North Africa, where it is also found in winter, while eastwards it ranges as far as North-west India.

The nest, built of twigs, dead reeds, and sedge, is usually placed just above the water, in dense reed-jungles or in tamarisk bushes. The eggs, generally six in number, are dull white in colour, sometimes tinged with pale greenish.

Like the Common Bittern and Night-Heron, this species feeds by night, and lives on frogs, small fishes, worms, aquatic insects and their larvæ.

It passes the day lurking among the dense tangled growth of the swamps, and if suspicious of danger, is an adept at threading its way through the thick cover of its surroundings. Lord Lilford states that "the only note I ever heard uttered by this species is, to my ear, best rendered by 'woogh,' 'woogh'—a sort of deep guttural cough."

The female differs from the male, in being rather smaller, also in having the head brownish-black in colour, the cheeks and neck reddish-buff, and the back and scapulars dark chestnut with narrow margins of buff, while the underparts are buff streaked with brown.

Length, 13 inches ; wing, 6 inches.

THE COMMON BITTERN

Botaurus stellaris (Linnæus)

PLATE 96

The Bittern, whose name is familiar to many, though comparatively few have seen it at large or listened to its weird love-song, has occurred in most of the English counties, though the dense reed-beds and sedgy bogs of East Anglia have been its chief stronghold from ancient times. Although almost exterminated as a breeding species about the middle of last century, it was still known to nest in Norfolk till 1868, and quite a young bird was observed there in 1886. Again, after another twenty-five years, the Bittern was found to be nesting in the same county in 1911, and under careful protection the birds have so increased that a fair number of pairs now occupy the old resorts, at least twelve nests having been noted this year (1925). Elsewhere in our islands the bird is known as a winter visitor as well as a migrant in spring and autumn, and would increase still more in numbers if it could obtain better protection at these times.

Abroad, it has a wide range over Europe, North Africa, and Asia as far east as Japan.

The nest is hidden amongst the cover of dense reed-jungles, and consists of a mass of the dead stems of water-plants. It contains four eggs, of a dull brownish-olive tint, without any markings, and laid early in the year, often in March. When sitting on her eggs, a captive Bittern which I had opportunities of watching, on being approached usually puffed out her feathers, appearing a much larger bird than she really was.

The food consists of fishes, reptiles, and any small mammals up to the size of a Water-Vole, or even birds as large as a



COMMON BITTERN

Water-Rail, that can be reached with a quick lunge of its pointed bill. The young when disturbed in the nest have been known to disgorge the nestlings of other birds.

Mr. E. W. Wade, writing in Witherby's *British Birds* (vol. i. p. 330), says: "The peculiar note from which the Dutch name (Roerdomp) is derived, is uttered as the bird sits in some reed-bed over the water. It resembles the bellowing of a bull, but with a deeper resonance. When heard at close quarters the bird seems to catch its breath three times, as if inhaling air, and then booms three or four times, the first boom sounding half-choked, the others clear and loud, after which it is silent for twenty minutes or half-an-hour. On wet days the note is oftener heard than on fine." This love-song of the Bittern may be heard by day as well as throughout the night.

Living among the thick cover of lonely swamps, the bird leads its solitary life concealed among the reeds in the day-time, where it may be easily overlooked owing to the colour of its plumage harmonising so closely with its surroundings. Loth to leave its retreat by taking wing, if approached in its hiding-place, the bird will immediately straighten itself out in an upright position, with its bill pointing to the sky, always facing the intruder, but moving so gradually that the motion is hardly perceptible. I have often watched a captive bird carry out this manoeuvre, and was struck with the close resemblance the striped and barred plumage on the neck and breast bore to withered reed-stems.

As evening deepens the Bittern becomes active and may be seen passing from one reed-clump to another on noiseless wings.

The strange aloofness of this bird's character combined with its nocturnal habits, of which little appears to be known, have lent an interest to the Bittern which makes its very name attractive to the bird lover, and it is gratifying to know that the encouragement it has received to re-occupy its former haunts has been so successful.

The male and female are alike in colour.

Length, 28 inches; wing, 13 inches.

THE AMERICAN BITTERN

Botaurus lentiginosus, Montagu

This New-World species has been recorded about forty times in the British Islands, a good many of these having been obtained in Ireland. The first was killed in Dorsetshire in 1804, when the bird was first distinguished as a different species by Montagu. Curiously enough, it has never occurred on the Continent of Europe, although it has visited Greenland and Iceland. The home of this species is in America, its range extending over the greater part of that continent. Howard Saunders says (*Manual of British Birds*, 2nd ed.), "When situated on dry ground the nest is a very slight structure of reeds and grass; but in places liable to inundations it is sometimes considerably elevated."

In colour the eggs closely resemble those of the Common Bittern, and, according to Seeböhm, are from three to five in number.

The food consists chiefly of frogs and other reptiles, as well as fishes and small mammals. The love-note differs from that of our bird, the sound having been compared to that caused by a mallet when driving home a stake in swampy ground.

In general its habits and appearance resemble those of the Common Bittern, but it is rather less in size, the crown of the head is brown instead of black, the vermiculations are finer, and the quill feathers of the wing are a uniform slaty-brown, without bars. Mr. J. G. Millais tells me its flight is also more rapid and it rises very swiftly.

Length, 24 inches; wing, 11 inches.

